# Love Food, Hate Waste NSW food waste tracking survey 2015-16

**lovefoodhatewaste.nsw.gov.au** Waste less food, save money and our environment





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# **1. Executive summary**

The serious environmental, economic and social impacts of food waste have gained increasing recognition in NSW businesses and households. To tackle these impacts, the NSW Government is delivering the Love Food Hate Waste (LFHW) program which aims to reduce food waste across the state.

Through LFHW, a benchmark survey was conducted in 2009, followed by two additional surveys of NSW residents in 2011 and 2012. The 2015 survey was conducted with 1,337 NSW residents online from 23 October–1 November 2015. The original target was 1,200 NSW residents, but an additional 137 surveys were completed to ensure a representative number of residents from NSW's culturally and linguistically diverse community.

#### The objectives of the 2015 survey were to:

- 1. Measure current attitudes to and awareness of environmental issues, focusing on food waste
- 2. Determine the effectiveness of LFHW in reducing the volume of food waste NSW households generated and disposed of
- 3. Explore the influence of LFHW in encouraging people to avoid wasting food
- **4.** Measure why people wasted food when eating out to encourage NSW food businesses to develop strategies to help their customers reduce food waste.

A brief summary of the research results follows.

#### The most wasteful NSW residents

In 2015, the groups who wasted the most food by volume were:

- residents aged 18–34 (7.6 litres per week wasted compared to the average of 5.9 litres per week)
- men, who wasted more than women (6.3 litres per week compared to 5.6 litres)
- households with an annual income of \$100,000 and over (6.5 litres per week compared to 5.9 litres per week wasted by households with an annual income of less than \$100,000)
- families with children and shared households (non-related), who wasted more than other types of households, with 7.0 and 7.1 litres wasted per week respectively (compared to 5.9 litres wasted by the average household).

#### People who were most successful at avoiding wasting food

The proportion of NSW households that avoided wasting food increased from the 2012 survey, with NSW households:

- that reported at least one way in which they avoided wasting food rising from 96% in 2012 to 97% in 2015
- that said they used five or more techniques to avoid wasting food rising from 61% to 68% in 2015
- that used ten or more ways to avoid wasting food increasing from 3% to 10% in 2015.

#### People's behaviour regarding, and attitudes to, food waste

#### **Environmental problems**

- Concerns about the environment increased in 2015 from 2012, with almost one in four NSW residents citing they had 'a great deal' of concern about environmental issues (23%), compared to just under one in five in 2012 (18%).
- 'Quality of life' remained the top environmental concern, followed by 'concern for future generations'.
- More NSW residents believed wasting food contributed to climate change in 2015 (46%) than in 2012, and was in line with levels seen in 2009.

#### Household food waste

 While environmental worries were on the rise in 2015, so were concerns about food waste, with almost one in ten people citing they wasted 'much more than they should' (9% compared to 2% in 2012).

#### Volumes of waste in garbage bins

- Packaging continued to be wrongly considered the largest volume of waste in the average NSW household bin (63% of people), although the percentage of people believing this fallacy had decreased since 2009, coinciding with an increase in those who rightly considered food to comprise the largest volume of waste in garbage bins.
- Packaging was considered to account for the highest amount of waste in terms of weight, suggesting NSW residents lacked knowledge about levels of food wasted by the average household.

#### Main reasons for households wasting food

• While one in six people surveyed claimed not to waste any food, food being left too long in the fridge or freezer was the main reason food got wasted (16%), followed by people not finishing their meal (12%).

#### Planning for meals when shopping

- More survey respondents planned meals in 2015 than respondents in previous surveys. There was a particular increase in more people planning meals to be cooked in the next few days in 2015 (52%, up from 41% in 2012, 40% in 2011 and 35% in 2009).
- In 2015, respondents were also more conscious of food costs, with more people than in previous surveys citing they stuck to a budget when buying food (51%), purchased food 'on special' (43%) and bought food in bulk (23%).

#### Volume and value of food wasted

- The largest amount of food wasted by volume was fresh food followed by leftovers, and then packaged and long-life food.
- The total average volume of food wasted increased since the 2012 survey from 5.0 litres a week to 5.9 litres a week.
- The perceived value of food thrown away each week increased by about a third from 2012 as people became more aware of the amount of food they actually threw away.

#### **Food preparation**

• More thought went into food preparation than in 2012, with increases in people who considered portion sizes and exercised control in the amount of food they ate (56% compared to 46%). However, there were increases in those making extra food just in case they needed it (24%), especially among people aged 18–34 (38% of total).

#### Leftovers

- While saving leftovers in the fridge remained the most common way of storing leftover food (59%), more people than in 2012 stored food in the freezer (41%).
- There was also an increase from 2012 in the proportion of residents saving leftovers in the fridge and throwing them out later (from 8% in 2012 to 16% in 2015), and storing leftovers in the freezer (from 6% in 2012 to 12% in 2015).

#### Attitudes to the NSW Government role in reducing food waste

 On par with previous surveys, more than half the respondents in 2015 (59%) thought the government should play a role in reducing food waste, especially people speaking a language other than an Asian or European language at home such as Arabic (78%), those aged 18–34 (72%), people speaking an Asian language at home (69%) and families with children (65%).

#### Awareness of the Love Food Hate Waste program

Awareness of media, advertising or promotions related to food waste rose in 2015 from 2012 and was in line with awareness levels seen in 2011 (both 17%).

After seeing or hearing the LFHW advertisement, respondents were more likely to use leftovers for other meals (31%), write a shopping list (31%) and plan their meals in advance (30%).

While television remained the main way people became aware of food waste issues (58%),the internet as a source of awareness doubled from 2012 in 2015 (30%). Similarly, newspapers and Facebook as sources of awareness also rose significantly (29% and 18% respectively).

With the exception of TV, sources for awareness of the LFHW program lifted across the board, with the internet the most cited source in 2015 (33%).

While awareness of the LFHW logo remained low, awareness continued to rise to just under one in ten people (8%).

#### **LFHW** subscribers

- In general, LFHW subscribers cited significantly more concern about environmental issues than average, with 65% of respondents saying they had a great deal of concern.
- The key area of concern about the environment for LFHW subscribers was maintaining ecosystems (45%) followed by concern for future generations (32%).
- LFHW subscribers were more aware of the actual volume of food waste in the average household bin, citing 31% of waste in the average bin was food waste, compared to the average NSW household citing 23%.
- LFHW subscribers were more likely than average to cite family members changing their plans as the main reason food got wasted in their household (16% compared to 6%).
- LFHW subscribers were more likely than average to have eaten out at a restaurant or café in the last three months (89%) and a pub (47%).

#### Wasting food when eating out

New to the LFHW survey in 2015 was the inclusion of several questions relating to food waste while eating out. These questions were based on research carried out by WRAP in the UK during 2012–13.

Eating out was a popular activity in 2015, with most NSW residents having eaten at a restaurant or café (70%) or at a quick service restaurant (67%) in the past three months. More than half of respondents also ate out at least weekly (53%).

While many people ate out as a treat for themselves, family and friends (25%), or for a special occasion (25%), a good proportion also ate out to keep them going throughout the day (20%).

In terms of food waste when eating out, around two in five NSW residents (42%) indicated leaving food at the end of their meal, compared to just over a quarter of respondents (27%) in the UK study. However, the results are not directly comparable due to a difference in the wording of this particular question.

For NSW residents, carbohydrates were the food type most commonly left after a meal (21%), followed by vegetables, salad or coleslaw (12%). There was a similar result in the UK study with chips, vegetables and salad (including garnishes) the types of food most likely to be left on customers' plates.

In terms of portion sizes, almost half of NSW residents and people in the UK study agreed large portions of food were off- putting (49% of NSW respondents and 44% of UK respondents). A similar proportion of NSW residents (46%) also preferred restaurants where the staff advised them of portion sizes.

NSW residents cited the main reasons for leaving food when eating out were too large a portion size and ordering too much food (41% and 20% respectively). There was a similar result in the UK study where two-fifths of meal leavers stated that one reason they left food was because the portion was too big, and one in ten stated they ordered or served themselves too much.

While the most popular reasons in NSW for choosing a restaurant or eatery were the variety of the menu followed by friendliness of the staff (74% and 73% respectively), about two in five NSW residents (42%) also took into account whether the restaurant or eatery was environmentally responsible.

Doggy bags were generally seen as a positive addition to eating out. Over two-thirds of survey respondents had asked for a doggy bag in the past (71%) and a similar percentage agreed that they appreciated it when staff at a restaurant or eatery offered one (69%). Further, over two-thirds of respondents said they would think more favourably of a restaurant that offered a doggy bag (71%).

#### Implications of the research findings

- 1. Policies should focus on avoiding wasting food, given 2015 survey results show greater concern for the environment and more awareness of food waste impacts, in line with broader anti-consumerist trends.
- 2. The best communications provide people with a way to feel good about themselves by making a small but positive change to ways in which they avoid wasting food.
- 3. More people are thinking about food preparation and consumption so the LFHW campaign could include timely reminders about the everyday things people can do to reduce food waste, such as eating leftovers.
- 4. The LFHW campaign can encourage behaviour that reduces food waste such as reinforcing that it is good to ask for a doggy bag for leftovers at eateries, particularly among those aged 18–34, and encouraging restaurants and cafes to offer these options.
- **5.** There are still some gaps in knowledge, such as people underestimating food as a proportion of all waste and confusion over the meaning of 'use by' and 'best before' dates. Future campaigns may need to target these issues.

#### Background

Love Food Hate Waste (LFHW) is a program that delivers projects to help households and businesses reduce the amount of edible food they waste. Part of LFHW is an educational grants program, administered by the Environmental Trust, that supports local government and non-government partners in delivering educational community projects. To date, about\$1.7 million has been provided for 72 LFHW projects in local communities across NSW.

When the first LFHW tracking survey was initiated in 2011, the first educational projects that had been granted funding were under way but not completed. Similarly, when the field work for the second study in 2012 was being implemented, some projects that had been provided with second-round grants were under way. When the latest tracking survey was taking place in 2015, four grant rounds had been completed and the LFHW program had been brought under the major Waste Less Recycle More initiative.

Everyone wastes food. However, previous research has identified that some groups waste more than others. As a result, the target audiences that were targeted by the 2015 survey were:

- people aged 18-34 years old
- high-income households earning \$100,000 or more per year
- families with children.

The survey's key stakeholders were:

- state and local government, key deliverers of LFHW
- non-government organisations (NGOs)including Do Something! and the Youth Food Movement – these organisations have participated in food waste avoidance education programs and campaigns
- program partners from diverse sectors including local and state government, NGOs, community groups, business and industry.

As well as two previous surveys conducted in 2011 and 2012, a benchmark survey was conducted in 2009.

#### 2015 survey objectives and outcomes

The 2015 survey's objectives were to identify NSW residents' knowledge of, attitudes to and behaviour regarding food waste. The research will be used to:

- develop initiatives that reduce the volume of household food waste generated and disposed of
- influence new habits and behaviour to encourage more efficient food purchases, storage, preparation and consumption.

The above objectives will be achieved by:

- increasing community knowledge of the environmental, social and economic impacts of wasting food
- increasing community awareness of the amount of food waste generated and sent to landfill
- increasing knowledge of the best ways of buying, storing and preparing food and using leftovers
- promoting easy ways for people to avoid wasting food in the home such as planning meals, shopping from a list, planning correct portion sizes and using more effective food storage techniques, as well as knowing what to do with food waste
- supporting transfer of knowledge and skills from institutions and between generations regarding more efficient food purchase, preparation and consumption
- providing a platform for increased knowledge and awareness of avoiding food waste in business.

#### Who was surveyed?

This survey was a continuation of the research conducted in 2011 and 2012, albeit with some minor changes. The sample was exactly the same in terms of gender, age, postcodes and locations – Sydney, Newcastle, Wollongong, a large country town with a population of more than 15,000, a small country town with a population of between 3,000 and 15,000, and country rural areas of NSW.

The original target was about 1,200 NSW residents, although an additional 137 surveys were completed to ensure there were a minimum number of residents from NSW's culturally and linguistically diverse (CALD) community.

Surveys were conducted online with representative samples of people aged 18 years and over who were primarily responsible for buying, preparing or storing food in their household. Surveys were conducted in English.

The surveys measured:

- general environmental knowledge, attitudes and behaviour
- knowledge of environmental, social and economic impacts of wasting food
- attitudes to and values relating to food preparation and storage
- barriers to and drivers for reducing food waste in the home
- self-reported behaviour and actions relating to household food management and waste
- memory of LFHW materials including recent social media advertising.

The surveys were conducted between 23 October and 11 November 2015.

After the surveys had been conducted, LFHW subscribers were emailed an invitation to complete the survey online. After two reminder emails, 98 subscribers had completed the survey. They were not rewarded for their participation.

#### About survey respondents

Table 1 shows the demographic profile of survey respondents.

Table 1: Demographic profile of survey respondents

Age	Number	%
Total sample	1337	100
18–24	121	9
25–34	254	19
35–44	302	23
45–54	228	17
55–64	193	14
65+	239	18

Gender	Number	%
Total sample	1337	100
Male	559	42
Female	778	58

Living area	Number	%
Total sample	1337	100
Sydney	843	63
Newcastle	103	8
Wollongong	63	5
Large country town (population over 15,000)	157	12
Small country town (population between 3,000 and 15,000)	111	8
Country rural area	60	4

Household income	Number	%
Total sample	1337	100
Less than \$20,000	71	5
\$20,000–\$39,999	229	17
\$40,000–\$59,999	215	16
\$60,000–\$79,999	181	14
\$80,000–\$99,999	166	12
\$100,000–\$149,999	212	16
\$150,000 or more	95	7
Prefer not to indicate	168	13

Employment/activity status	Number	%
Total sample	1337	100
In paid wok (full time or part time – includes being self-employed)	691	52
Unemployed and looking for work	69	5
Student	85	6
Home duties	150	11
Retired/age pensioner	269	20
Other pensioner	59	4
Other	14	1

Main family background	Number	%
Total sample	1337	100
Australian	865	65
Anglo-Saxon	128	10
Italian	40	3
Spanish	7	1
Chinese	44	3
Arabic	18	1
Portuguese	1	0
Greek	30	2
German	17	1
Vietnamese	21	2
Filipino	7	1
Indian	45	3
Other, please specify	115	9
Prefer not to indicate	12	1

Languages spoken at home	Number	%
Total sample	1337	100
English	1259	94
Cantonese and/or Mandarin	45	3
Arabic	32	2
Italian	33	2
Greek	33	2
Macedonian	3	0
Vietnamese	32	2
Spanish	32	2
Korean	17	1
Hindi or other Indian dialect	34	3
Tagalog	10	1
Other, please specify	50	4
Prefer not to indicate	1	0

Household composition	Number	%
Total sample	1337	100
Single person household	296	22
Family with children	397	30
Family, only adults (16+)	506	38
Shared household, non-related	68	5
Other (specify)	70	5

Education level	Number	%
Total sample	1337	100
No formal schooling	1	0
Primary school	10	1
Some secondary school	128	10
Completed secondary school	263	20
Trade or technical qualification	372	28
University/college diploma, degree or higher degree	555	42
Prefer not to answer	8	1

Number of people living in household	Aged 0–6	Aged 7–12	Aged 13–17	Aged 18–24	Aged 25–34	Aged 35–44	Aged 45–54	Aged 55–64	Aged 65+
inving in nousenoid	Number	Number	Number	Number	Number	Number	Number	Number	Number
Total sample (excludes single person households)	1041	1041	1041	1041	1041	1041	1041	1041	1041
No people	830	857	847	840	741	715	743	789	798
1 person	142	121	148	123	161	184	171	155	107
2 people	55	59	40	63	129	140	125	97	133
3 people	10	2	4	10	7	2	2	0	2
4 people	3	2	2	5	3	0	0	0	1
5 people	0	0	0	0	0	0	0	0	0
6 people	1	0	0	0	0	0	0	0	0

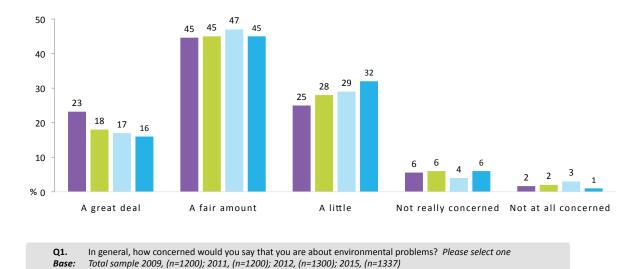
# 3. Detailed survey findings

# **3.1 Concerns about environmental problems**

#### Overall level of concern about the environment

Concerns about the environment increased in 2015 with almost one in four NSW residents (23%) saying they had 'a great deal' of concern about environmental issues, compared to just under one in five (18%) in 2012. This increase in concern was driven primarily by residents aged 18–34, where one in three (32%) said they had 'a great deal' of concern about the environment.

Mirroring the increasing level of 'a great deal' of concern about environmental problems was a decreasing level of 'a little' concern about the environment (25% in 2015 compared with 32% in 2009).



#### Figure 1: Overall level of concern about the environment

There was no difference in the level of concern about the environment in 2015 between residents with an annual household income of under \$100,000 and residents with an annual household income of \$100,000 or more.

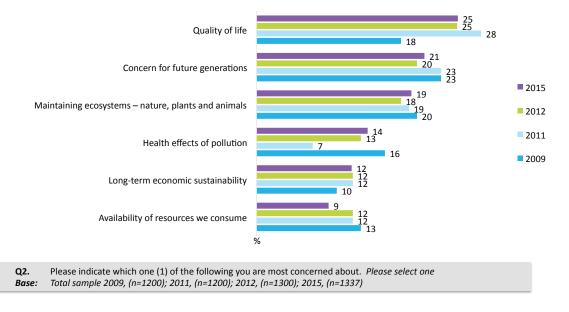
In general, LFHW subscribers had significantly more concern about the environment with 65% saying they had 'a great deal' of concern.

#### Issues of concern regarding the environment

'Quality of life' remained the top issue of concern regarding the environment among NSW residents, with one in four (25%) citing it as their main concern, followed by 'concern for future generations' (21%), and 'maintaining ecosystems' (19%).

'Quality of life' was more likely to be the main concern of NSW residents aged 18-34 compared to those aged 35-54 and 55 and over (32% compared to 23% and 22% respectively). However, 'concern for future generations' was more likely to be the main concern for residents aged 55 and over compared to those aged 18-34 and 35-54 (27% compared to 17% and 18% respectively).

Men were more likely than women to be most concerned about 'quality of life' (29% compared to 21%), while women were more likely than men to be most concerned about 'maintaining ecosystems' (23% compared to 16%).



#### Figure 2: Issues of concern regarding the environment

There were no major differences in the issues of concern between families with children and the total sample.

There were no differences in the issues of concern between NSW residents with an annual household income of under \$100,000 and residents with an annual household income of \$100,000 or more.

The main issue of concern for LFHW subscribers was 'maintaining ecosystems' (45%) followed by 'concern for future generations' (32%).

# 3.2 Concerns about household waste

#### How much uneaten food was thrown away

While environmental worries were on the rise in 2015, so were concerns about food waste. The proportion of residents agreeing their household threw away much more uneaten food than it should significantly increased from previous surveys (9% in 2015 compared to 2% in 2012, 2011 and 2009). This increase was driven primarily by those aged 18–34 (19% compared to 7% of 35–54-year-olds and 2% of those aged 55 and over). Since 2012, the proportion of 18–34-year-olds who said they threw away much more than they should increased by 17 percentage points in 2015 (up from 2% in 2012).

Levels of moderate concern (those agreeing they threw away more food than they should) continued to rise and were on par with levels seen in the 2009 benchmark study at 15%. This increase was driven primarily by residents with an annual household income of \$100,000 or more (23% compared to 11% of residents with an annual household income of less than \$100,000).

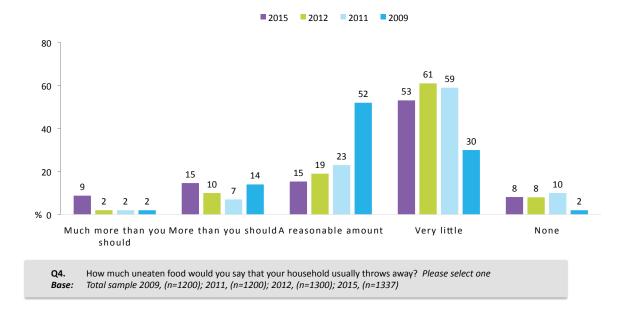


Figure 3: How much uneaten food was thrown away

In terms of the CALD community, NSW residents who spoke Arabic at home were more likely to say they threw away much more food than they should (27% compared to the average of 9%), while those who spoke a European language were more likely to say they threw away 'more food' than they should (20% compared to the average of 15%).

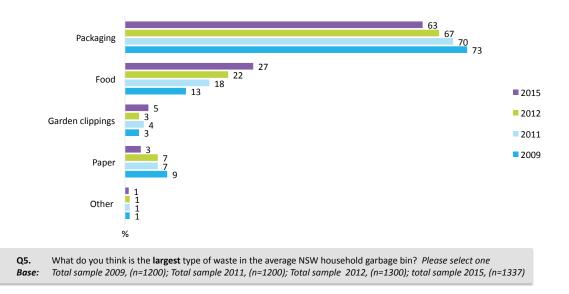
#### Perceptions of the type of waste most commonly thrown away by weight

Packaging continued to be wrongly considered the most common type of waste thrown away in the average NSW household bin (63% of respondents). However, the percentage of people believing this fallacy had decreased from 2009, coinciding with a continued increase in those who believed food waste was the most common type of waste in bins. In 2015, NSW households continued to consider food waste common, and more people in the 2015 survey considered food waste to be the type most commonly thrown away than in previous surveys (27% compared to 22% in 2012).

Sydney residents were generally more likely to correctly say food accounted for the type of waste most commonly thrown away (32% compared to the state average of 27%), as were NSW residents aged 18–34 (40% compared to 27%) but not NSW residents aged 55 and over (18% compared to 27%).

Residents of large country towns and small country towns were less likely to say food was the type of waste most often thrown away (15% and 14% respectively compared to 27%).

Figure 4: Perceptions of the type of waste most commonly thrown away by weight (measured by percentage)

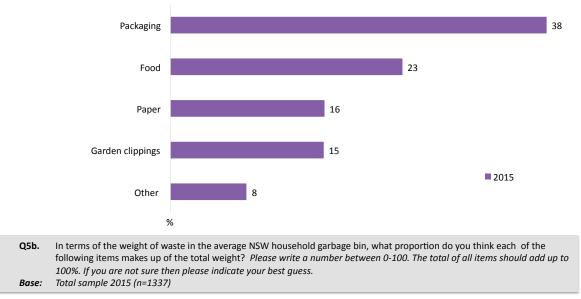


#### Perceptions of the proportion of the weight of waste

A new question was added to the 2015 tracking survey to determine if respondents were confused by the terminology 'the largest type of waste'. It was hypothesised survey respondents may be interpreting this phrase in terms of size rather than weight. To test this, a question was included requiring respondents to allocate a percentage to each type of item, indicating its proportion of weight in the household bin.

Survey respondents showed a clear understanding of the question, although packaging remained at the top of the list. This figure suggested NSW residents lacked awareness of the fact food waste took up more than 35% of an average household waste bin.

Figure 5: Perceptions of the proportion of the weight of waste (measured by percentage)



Average proportion of weight of waste

LFHW subscribers were more aware of the volume of food waste in the average household bin with the average percentage allocated for food waste being 31% compared to a person in an average NSW household citing 23%.

#### Perceived value of food wasted

The perceived value of wasted food each year remained underestimated by a large proportion of NSW residents with just over one in three (35%) saying it equated to between \$100 and \$400 a year.

Residents in small country towns and country rural areas were more likely to underestimate the value of food waste with 49% and 42% respectively saying it equated to between \$100 and \$400. Similar proportions of Sydney and Wollongong residents perceived the value to be between \$100 and \$400 (35% and 34% respectively), while 28% of Newcastle residents perceived the value to be between \$100 and \$400.

Men and women were equal in their level of perceived value of wasted food each year, while those aged 18–34 were less likely to underestimate the value of food wasted compared to those aged 55 and over (32% compared to 42% respectively perceived the value to be between \$100 and \$400). Those aged 18–34 were more likely to estimate the value to be between \$500 and \$1000 (51% compared to 41% of those aged 55 and over).

Residents with an annual household income of \$100,000 or more were more likely to underestimate the value than residents with an annual household income below \$100,000 (37% compared to 28% respectively perceived the value to be between \$100 and \$400).

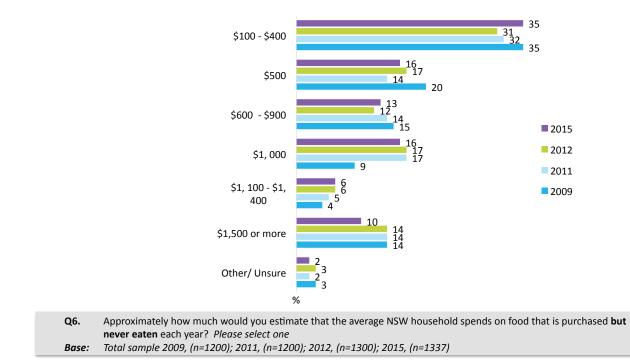


Figure 6: Perceived value of food wasted (measured by percentage)

Those aware of LFHW communications were more likely to estimate a higher value for wasted food than those who were not aware.

# 3.3 Knowledge of dates on food

#### Understanding of 'use by' dates

Understanding of 'use by' dates remained unchanged in 2015 among the general NSW population, with just under two-thirds of people (64%) correctly believing a 'use by' date meant food must be eaten or thrown away by that date.

Families with children and shared households tended to be more likely than average to correctly state the 'use by' date meant food must be eaten or thrown away by that date (71% and 76% respectively compared to the average of 64%).

NSW residents with an annual household income of less than \$100,000 or more tended to be more likely than those with an annual household income of below \$100,000 to correctly state the 'use by' date meant food must be eaten or thrown away by that date (69% compared to 63%).

Residents aged 18–34 were more likely than those aged 55 and over to correctly say the 'use by' date meant food must be eaten or thrown away by that date (73% compared to 52%), suggesting more misunderstanding of the term: 'use by' date among those aged 55 and over.

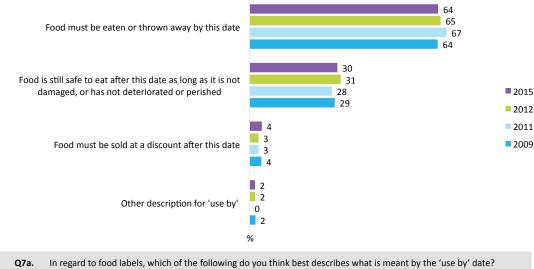


Figure 7: Understanding of 'use by' dates (measured by percentage)

**Q7a.** In regard to food labels, which of the following do you think best describes what is meant by the 'use by' date? **Base:** Total sample 2009, (n=1200); 2011, (n=1200); 2012, (n=1300); 2015, (n=1337)

#### Understanding of 'best before' dates

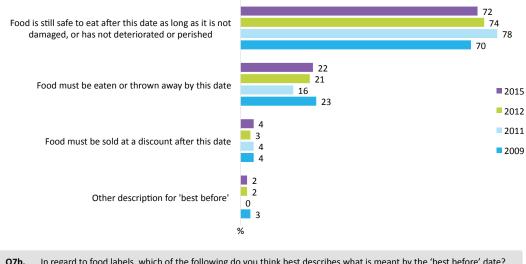
Similarly, understanding of the term: 'best before' remained relatively unchanged in 2015 among the general NSW population, with just under three out of four people (72%) believing food was still safe to eat after the date as long as it had not been damaged or gone rotten.

Families with children tended to be less likely than the average NSW household to correctly state the 'best before' date meant food was still safe to eat after that date as long as it had not been damaged or gone rotten (64% compared to the average of 72%).

NSW residents with an annual household income of \$100,000 or more tended to be more likely than those with an annual household income of less than \$100,000 to correctly state the 'best before' date meant food was still safe to eat after that date as long as it had not been damaged or gone rotten (76% compared to 70%).

NSW residents aged 55and over were more likely than those aged 18–34 to correctly say the 'best before' date meant food was still safe to eat after that date as long as it had not been damaged or gone rotten (82% compared to 61%) suggesting greater misunderstanding existed among those aged 18–34 regarding the term: 'best before' date.

Figure 8: Understanding of 'best before' dates (measured by percentage)



**Q7b.** In regard to food labels, which of the following do you think best describes what is meant by the 'best before' date? **Base:** Total sample 2009, (n=1200); 2011, (n=1200); 2012, (n=1300); 2015, (n=1337)

#### Misunderstanding when to eat or throw away food

Misunderstanding when to eat or throw away food leads to both unnecessary food waste and unsafe food consumption. As mentioned previously, the results indicated more misunderstanding among 18–34-year-olds of the true meaning of the 'best before' date and more misunderstanding among those aged 55 and over of the true meaning of the 'use by' date.

Almost half of NSW residents (45%) correctly understood the meaning of both the 'use by' and 'best before' dates. However, a small group of residents thought both labels meant the same thing. For example, of the 64% of residents who knew the meaning of the 'use by' date as being food must be eaten or thrown away by that date, about one-quarter (28%) thought the 'best before' date meant that as well.

		Definition of 'best before'								
		Total %	Food must be eaten or thrown away by this date %	Food is still safe to eat after this date as long as it is not damaged, or has not deteriorated or perished %		Other (please specify) %				
		n=1337	n=849	n=395	n=55	n=24				
Definition of 'use by'	Food must be eaten or thrown away by this date	64	28	69	2	1				
	Food is still safe to eat after this date as long as it is not damaged, or has not deteriorated or perished	30	12	81	5	2				
	Food must be sold at a discount after this date	4	10	60	30	0				
	Other (please specify)	2	7	44	11	38				

Figure 9: Misunderstanding when to eat or throw away food

# 3.4 General attitudes to storing and using food

#### Planning how much food will be eaten when shopping

Attitudes to food waste and shopping remained relatively unchanged among the average NSW household. Most people said that food rarely got wasted, although very few people thought about how much food they would eat before shopping.

The largest difference in attitudes to food waste and shopping were attributed to age. Those aged 18–34 were more likely than those aged 55 and over to say they thought carefully about how much food they would eat when doing their shopping, with an average rating of 2.4 compared to 1.9 among those aged 55 and over.

Conversely, those aged 18–34 said they wasted much more food than they should being more likely than those aged 55and over to find the food they bought did not get eaten (average rating of 3.3 compared to 3.8 for those aged 55 and over).

Residents who spoke Cantonese or Mandarin at home were more likely to, when shopping, think carefully about how much food they would eat (2.6 compared to the state average of 2.1).

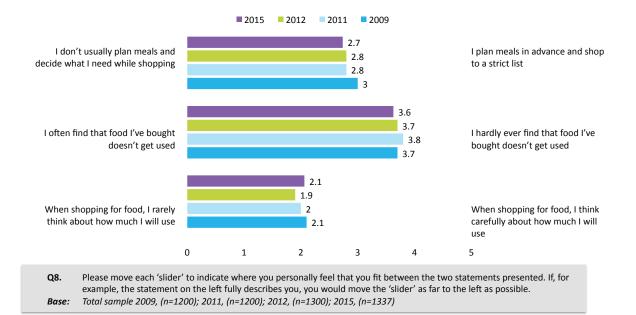


Figure 10: Planning how much food will be eaten when shopping

#### General attitudes to food waste

Almost two-thirds of respondents believed that food was not wasted if it was given to pets or composted and that the resources that created food were lost if food was bought and not eaten (both 62%).

In 2015, more people believed that 'Australians don't waste much food' than in 2012 (14% average and 27% for those who spoke an Asian language at home compared to 7% average in 2012). More people in 2015 than in 2012 also believed that 'leftovers that have been kept in the fridge for more than one day are unsafe to eat' (23% average and 35% for those who spoke an Asian language at home compared to 14% average in 2012).

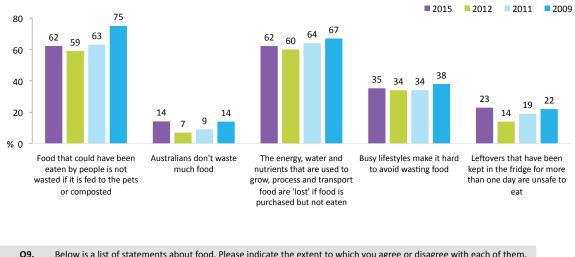


Figure 11: General attitudes to food waste

 Q9.
 Below is a list of statements about food. Please indicate the extent to which you agree or disagree with each of them. (NET Agree/Strongly Agree)

 Base:
 Total sample 2009, (n=1200); 2011, (n=1200); 2012, (n=1300); 2015, (n=1337)

In 2015, more households believed wasting food contributed to climate change than in 2012 (46% in 2015 compared to 37% in 2012), back in line with levels last seen in 2009. This result was generally steady across demographics such as geography and household income, although residents aged 18–34 were more likely than those aged 55and over to agree wasting food contributed to climate change (52% compared to 37%). Those speaking an Asian language at home were more likely than the average household to agree that wasting food contributed to climate change (58% compared to 46%).

The duration of freezing food items safely was changed in the 2015 survey from 12 months to 3 months. In previous surveys, when the statement referred to being able to store food

safely in the freezer for a year, between 24% and 28% of residents agreed. In the 2015 survey when the duration of safely freezing food was three months, agreement rose to 63%, suggesting that although residents were not sure of the exact amount of time food could be safely stored in the freezer, shorter time periods were preferred.

NSW residents aged 18–34 were less confident about storing items in the freezer than those aged 55 and over (53% of those aged 18–34 agreed most cooked food items could safely be stored for up to three months in the freezer without compromising food quality, compared to 70% of those aged 55 and over).

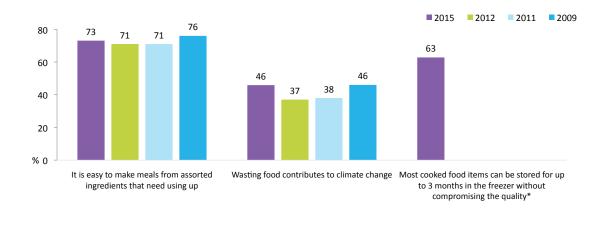


Figure 12: General attitudes to food waste

\*Note: Statement changed in 2015

Q9. Below is a list of statements about food. Please indicate the extent to which you agree or disagree with each of them. (NET Agree/Strongly Agree)
 Base: Total sample 2009, (n=1200); 2011, (n=1200); 2012, (n=1300); 2015, (n=1337)

Families with children were less confident than single-person households and shared households about storing food in the freezer (57% compared to 67% and 68% respectively), as well as about making meals from ingredients that needed to be used up (67% compared to 76% and 80% respectively).

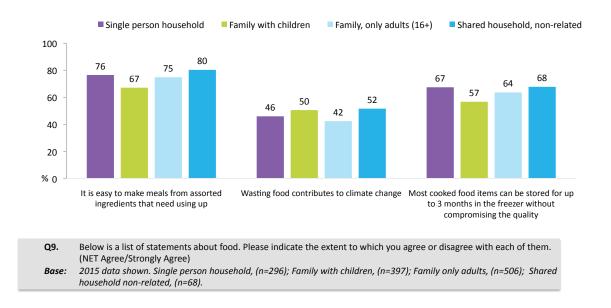


Figure 13: Attitudes to food waste-by household composition

Regionally, people in small country towns were much more likely than people in other areas to think 'it is easy to make meals from assorted ingredients that need using up' (83% compared to the average of 73%). People living in large country towns were most concerned about food contributing to climate change (49%). People living in country rural areas were most likely to agree food could be safely stored up to three months in the freezer, whereas people living in Wollongong were least likely to agree (69% compared to 54%).

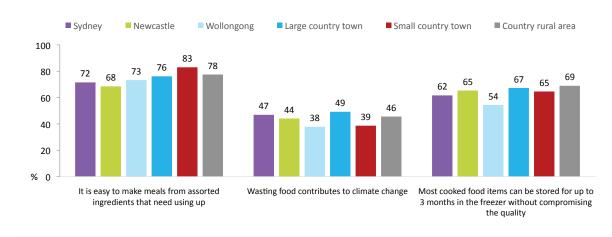


Figure 14: Attitudes to food waste - by region

Q9. Below is a list of statements about food. Please indicate the extent to which you agree or disagree with each of them. (NET Agree/Strongly Agree)
 Base: Sydney, (n=843); Newcastle, (n=103); Wollongong, (n=63); Large country town, (n=157); Small country town, (n=111); Country rural area, (n=60).

Those aged 55 and over were most likely to think it was easy to make meals from leftover ingredients (84%) and that cooked food could be stored in the freezer for up to three months (70%). However, older people were less likely to believe food waste contributed to climate change than those aged 18–34 (37% compared to 52% respectively). Equal proportions of male and female residents agreed wasting food contributed to climate change (46%).

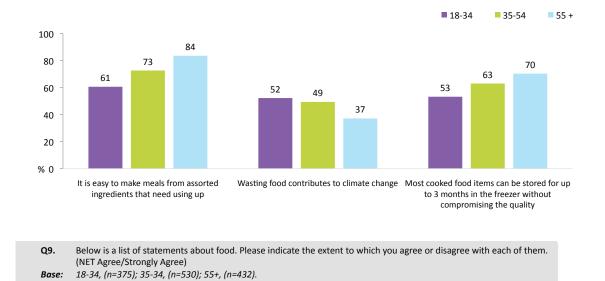


Figure 15: Attitudes to food waste - by age

# 3.5 Value and quantity of food wasted

#### Estimated amount of food thrown away measured in litres

NSW residents were asked to estimate the volume of food they throw away each week. The largest amount of food wasted by volume is fresh food, followed by leftovers, and then packaged and long-life food. Although the total average amount of food wasted has trended upwards since 2012, it continues to be less than the amount reported in 2011. Note: A comparison cannot be made with the results of the initial benchmark survey in 2009 due a change in the wording of categories used to calculate volume of food waste – in 2009 there were six separate categories, however, from 2011 onwards there are only three categories.

While the detailed 2009 results can't be compared, the overall volume of estimated food waste is comparable. This comparison shows that from 2009 to 2015, the volume of food waste reported has declined 0.8 litres, from 6.7 litres per household per week in 2009 to 5.9 litres in 2015.

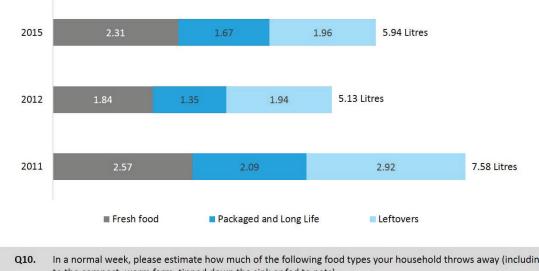


Figure 16: Estimated amount of household food wasted measured in litres

Q10. In a normal week, please estimate how much of the following food types your household throws away (including going to the compost, worm farm, tipped down the sink or fed to pets).
 Base: Total sample: 2011, (n=1200); 2012, (n=1300); 2015, (n=1337)

Based on their own estimation, NSW residents aged 18–34 continued to waste the largest amount of food in 2015 (7.6 litres per week compared to the average 5.9 litres per week), while those aged 55 and over continued to waste the least amount (4.6 litres per week).

Men tended to waste more than women (6.3 litres per week compared to 5.6 litres respectively), while households with a gross annual income of more than \$100,000 wasted

more than households with incomes under \$100,000 (6.5 litres per week compared to 5.9 litres respectively).

In terms of household types, families with children and shared households continued to waste the most food, with 7.0 and 7.1 litres wasted per week respectively (compared to the average of 5.9 litres).

#### Estimated value of food thrown away by type

Fresh food worth \$12.50 or more remained the most thrown out food type by value in 2015 with one in four NSW residents (26%) throwing away the equivalent of food worth \$12.50 or more every week. Those more likely to throw away such food every week included 18–34 year-olds (42%), those who spoke an Asian language at home (39%) and families with children (34%).

Other common food types thrown away worth \$12.50 or more included home delivered and takeaway meals (21%) and packaged and longlife food (20%).

Compared to 2012, similar proportions of residents overall in 2015 were throwing away food worth \$12.50 or more. However, twice as many people said they threw away home delivered and take-away food worth \$28.00–\$54.99 in 2015 (6%) than in 2012 (3%).

	Fresh food %		Packaged & long life food %		Frozen food %		Home delivered/ take-away meals %		Left overs %		Drink %	
	2012	2015	2012	2015	2012	2015	2012	2015	2012	2015	2012	2015
Do not purchase (\$0)	9	12	23	24	29	30	47	46	20	22	32	35
Less than \$12.50	63	62	58	56	56	51	38	34	61	58	54	49
\$12.50-\$27.99	17	12	11	10	9	9	8	8	12	10	7	6
\$28.00-\$54.99	5	7	4	5	4	6	3	6	4	4	2	4
\$55.00-\$84.99	3	3	2	3	1	2	2	4	2	2	2	1
\$85.00-\$114.99	1	1	1	1	1	1	1	2	2	2	2	3
\$115 or more	2	2	1	1	1	1	1	1	1	1	1	2

Figure 17: Estimated value of household food waste

\*Note: 2015 options changed to take into account CPI increase since 2012.

Q11.In a normal week, please estimate the dollar value of each food type that your household purchased but threw away without being consumed<br/>(including going into the compost, worm farm, tipped down the sink or fed to pets). Please make your best estimate in whole dollarsBase:Those who waste any non-zero amount of food in 2015, (n=1287)

#### Weekly household food waste by type and value

The perceived value of food thrown away each week increased by about a third in 2015 from 2012, from \$56 a week in 2012 to \$74.35 a week in 2015. This increase coincided with people's perceptions of an increase in the amount of food thrown away since 2012.

The most expensive type of food thrown away in 2015 remained fresh food worth \$15.69 a week followed by leftovers worth \$12.69 a week and drink worth \$12.33 a week.

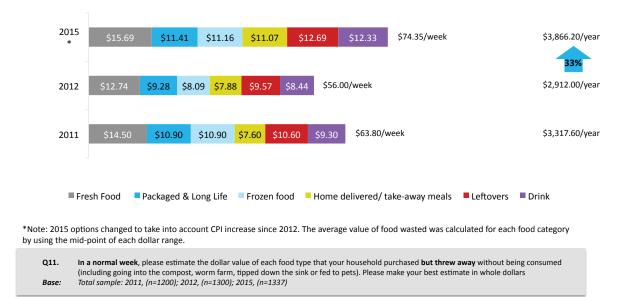


Figure 18: Estimated value of food thrown away by type

Based on their own estimate, those who wasted the most food in terms of value included:

- 18–34-year-olds (\$129.65 a week)
- households who spoke Arabic (\$117.33 a week)
- shared households (\$103.44 a week)
- households who spoke an Asian language (\$97.28 a week)
- families with children (\$90.41 a week)
- men (\$89.33 a week)
- Sydney residents (\$85.54 a week)

In 2009, wasted food was reported to be worth \$19.90 a week in NSW. Due to a questionnaire change from 2011 onwards, this figure was not directly comparable to the 2015 figure of \$74.35 a week. In an attempt to compare results from 2009 to 2015, the 2009 results were recalculated using the same method applied in 2015. The result was \$34.54 a week in 2009. Details of the 2009 recalculation follow.

From 2011 onwards, the perceived value of food wasted was calculated from the survey question 'Q11', where respondents were asked to estimate the dollar value of each food type that their household purchased but threw away without being consumed (including going into the compost or worm farm, being tipped down the sink or being fed to pets). Respondents were asked to estimate value for six types of food groups including drink by selecting the dollar range that best suited their estimate (including the option of zero dollars wasted). The mid-point of these dollar ranges was then used to calculate a mean score. Not all respondents were asked this question – those who said they did not throw away any food in survey question 'Q4' were not included in the mean calculation.

This method was also been applied to the original 2009 benchmark survey data to allow comparability.

FOOD TYPE	Original 2009 figures*	Recalculated 2009 figures	2015 figures
Fresh food, \$/week	\$ 6.60	\$ 8.84	\$ 15.69
Packaged & long life food, \$/ week	\$ 2.90	\$ 5.45	\$ 11.41
Frozen food, \$/week	\$ 1.80	\$ 4.29	\$ 11.16
Home delivered/take-away meals, \$/week	\$ 1.40	\$ 4.12	\$ 11.07
Leftovers, \$/week	\$ 5.40	\$ 7.27	\$ 12.69
Drink, \$/week	\$ 1.80	\$ 4.57	\$ 12.33
Total, \$/week	\$ 19.90	\$ 34.54	\$ 74.35
Total, \$/year	\$ 1,036.00	\$ 1,796.08	\$ 3,866.20

Figure 19: Original and recalculated 2009 figures regarding value of food wasted compared with 2015 figures

\*Note: 2009 figures represent the originally reported values, which have been rounded to the nearest 10 cents.

Since 2009, the total value of food items wasted more than doubled when comparing the recalculated 2009 data to 2015 data.

## 3.6 Reasons for household food waste

#### Main reason for households wasting food

While one in six households in 2015 claimed not to waste any food (16%), food being left too long in the fridge or freezer continued to be the main reason food was wasted in the household (16%), in line with results seen in previous surveys. This was followed by household members not finishing their meal (12%), although this reason continues to decrease over time.

NSW residents living in country rural areas were more likely to cite food being left too long in the fridge orfreezer as the main reason food was wasted (24% compared to the average of 16%), as were NSW residents who spoke Cantonese or Mandarin at home (25%).

Families with children were more likely to state the main reason for food being wasted was that household members did not always finish their meal (20% compared to the average of 12%), while households where Arabic was the main language spoken cited the main reason for wasting food was 'We cook too much food' (20% compared to the average of 9%).

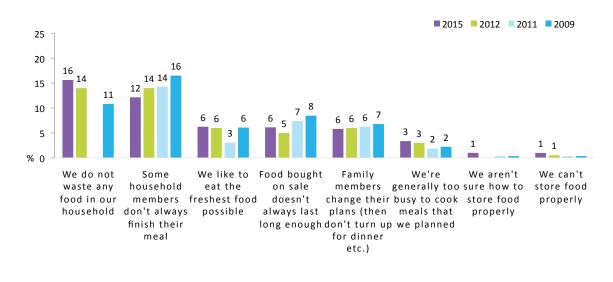


Figure 20: All reasons for household waste (to be continued...)

Q12a. Please think about why food gets wasted in your household. Firstly, select the main reason that food gets wasted in your household. Please select one
 Base: Those who specified a reason for their non-zero food waste amount 2012, (n=1297); 2015, (n=1229)

LFHW subscribers were more likely to cite family members changing their plans as the main reason food got wasted in their household (16% compared to 6% of average NSW households).

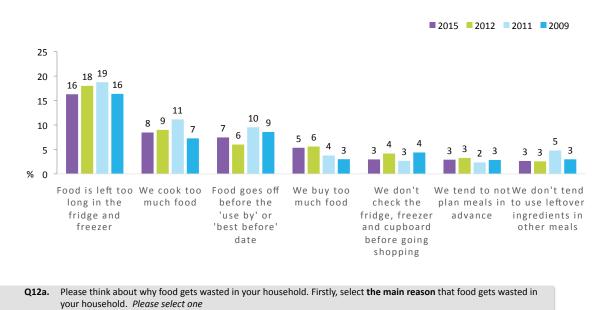


Figure 20 (continued): Main reason for households wasting food

Base: Those who specified a reason for their non-zero food waste amount 2012, (n=1297); 2015, (n=1229)

#### All reasons for households wasting food

In terms of all the reasons food was wasted in NSW households, food being left too long in the fridge or freezer was the most common reason in 2015 (30%), followed by food going off before the 'use by' date or 'best before' date (24%), food bought on sale not lasting long enough (24%), and some household members not always finishing their meal (23%).

Residents in both large and small country towns were more likely than the average NSW resident to cite the main reason for wasting food was food being left too long in the fridge or freezer (45% and 40% respectively).

Women were more likely than men to say food being left too long in the fridge or freezer was the main reason for wasting food (35% compared to 25%).

Residents aged 55 and over were more likely than those aged 18–34 to say food being left too long in the fridge or freezer was the main reason for wasting food (34% compared to 26%).

Households speaking a European language other than English were more likely to cite buying too much food (26% compared to the average of 16%) as well as cooking too much food (34% compared to the average of 20%) as reasons food was wasted. Arabic-speaking households cited family members changing their plans (31% compared to the average of 16%) and preferring to eat the freshest food possible (26% compared to the average of 16%) as the reasons food was wasted.

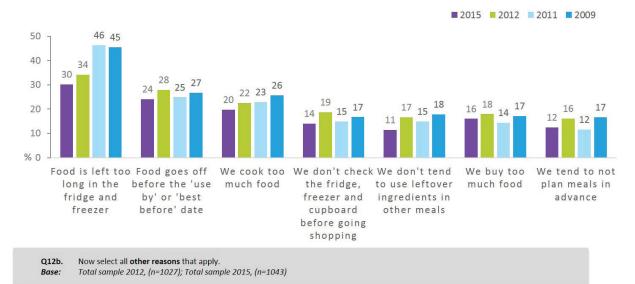


Figure 21: All reasons for household waste (to be continued...)

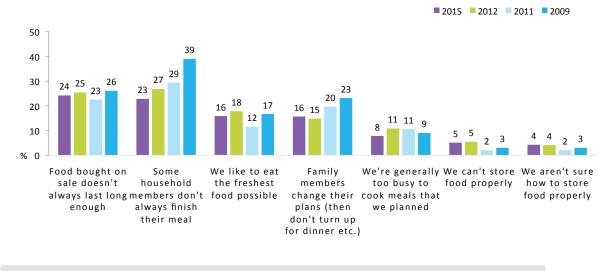


Figure 21 (continued): All reasons for household waste

Q12b. Now select all other reasons that apply. Base: Total sample 2012, (n=1027); Total sample 2015, (n=1043)

## 3.7 Shopping for food and planning meals

#### Food planning before shopping

In the 2015 survey, respondents continued to show increased thoughtfulness in planning their food purchases, with notable increases in both list writing (61%) and meal planning (53%).

Women were more likely than men to write a list and stick to it as much as possible (67% compared to 57%). People aged 55 and over were also more likely than those aged 18–34 and 35–54 to write a list and stick to it (70% compared to 57% and 59% respectively).

Households speaking an Asian or European language at home were less likely to write a list (40% and 52% respectively compared to the average of 62%).

In terms of income and household types, list writing and meal planning were relatively even across all groups.

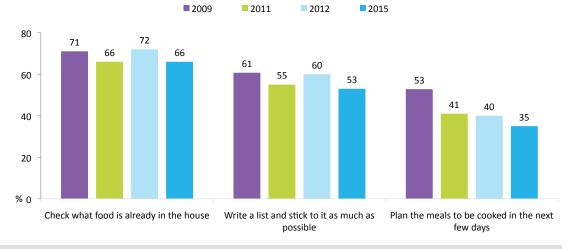


Figure 22: Food planning before shopping

Q13. Before you or a member of your household does your main food shopping, how regularly do you or they do the following? (Most/Always)

Base: Sydney, (n=843); Newcastle, (n=103); Wollongong, (n=63); Large country town, (n=157); Small country town, (n=111); Country rural area, (n=60).

People in Newcastle were most likely to check what food was already in the house (76%) while Wollongong residents were least likely (58%). Newcastle (42%) and country rural areas (43%) were least likely to plan meals to be cooked over the next few days. People in small country towns (69%) and Newcastle (67%) were most likely to write a list and stick to it, whereas Wollongong residents were least likely (57%).

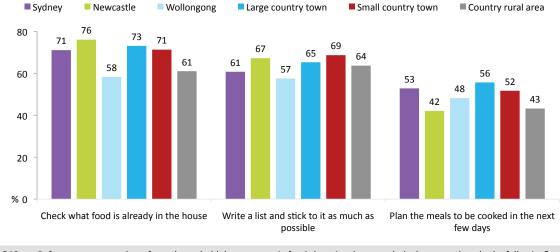


Figure 23: Food planning before shopping – by region

Q13. Before you or a member of your household does your main food shopping, how regularly do you or they do the following? (Most/Always)

Base: Sydney, (n=843); Newcastle, (n=103); Wollongong, (n=63); Large country town, (n=157); Small country town, (n=111); Country rural area, (n=60).

#### Behaviour while shopping

Compared to 2012, NSW households in 2015 were more conscious of food costs, with a higher proportion of respondents citing they stuck to a budget (51%), bought food in bulk (23%) and purchased food on special (43%).

Households with an annual income of less than \$100,000 were more likely than those with an annual income of \$100,000 or more to buy food according to a set budget (57% compared to 39%).

Households speaking a European language other than English were more likely to buy items in bulk (41% compared to the average of 23%).

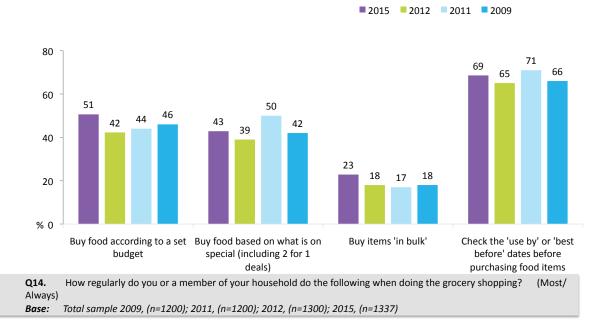


Figure 24: Behaviour while shopping

#### **Food preparation**

Compared to 2012, NSW residents thought more about food preparation in 2015, with increases in those considering portion sizes and exercising control (56% in 2015 compared to 46% in 2012). That said, there were also increases in those making extra food in case they needed it (24% in 2015 compared to 17% in 2012). Those making extra food in case they needed it were more likely to be aged 18–34 (38%).

Households speaking a European language other than English were less likely than other groups to consider portion sizes (42% compared to the average of 56%).

People aged 18–34 and households speaking an Asian language were more likely to make extra for a future planned meal (both at 46%, compared to the average of 35% and those aged 55 and over at 28%).

Residents aged 18–34 were more likely to make extra food in case they needed it (38% compared to the average of 24%), as were households speaking an Asian language (38%) and Arabic-speaking households (34%).

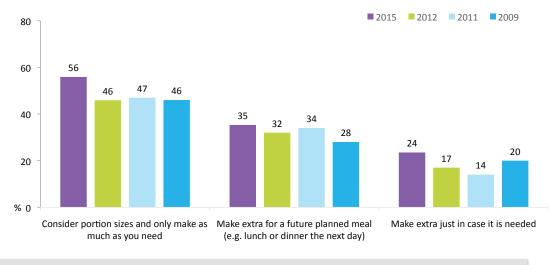


Figure 25: Food preparation

Q15. How regularly do you or a member of your household do the following when preparing a main meal? (Most/Always) Base: Total sample 2009, (n=1200); 2011, (n=1200); 2012, (n=1300); 2015, (n=1337)

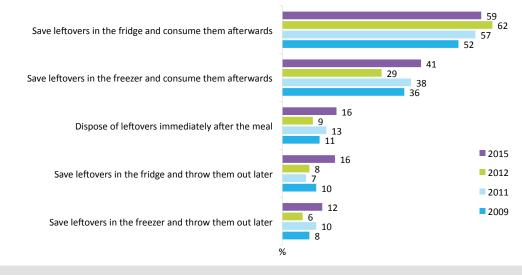
## 3.8 Dealing with leftovers

The most common way of dealing with leftover food in 2015 was, as in 2012, storing it in the fridge (59%). There were notable increases in all groups regarding storing leftovers in the freezer (41%) and discarding leftovers instead of consuming them. The percentage of people in 2015, compared to in 2012:

- disposing of leftovers immediately after the meal increased from 9% to 16%
- throwing away leftovers stored in the fridge increased from 8% to 16%
- throwing away leftovers stored in the freezer increased from 6% to 12%.

The increases in discarding leftovers were primarily driven by residents aged 18-34.

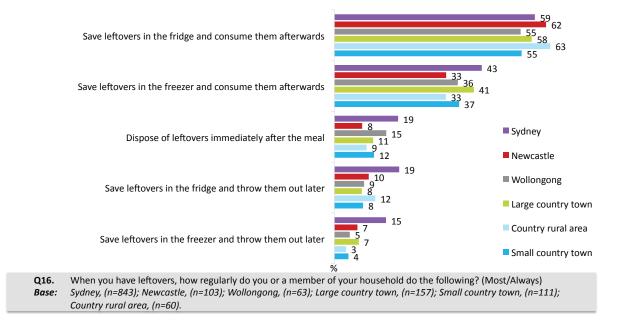
Figure 26: Dealing with leftovers (measured by percentage)



Q16. When you have leftovers, how regularly do you or a member of your household do the following? (Most/Always) Base: Total sample 2009, (n=1200); 2011, (n=1200); 2012, (n=1300); 2015, (n=1337)

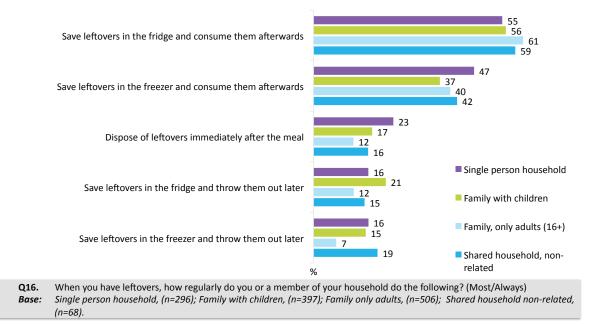
Sydney residents were more likely than Newcastle residents to save leftovers in the freezer and eat them afterwards (43% compared to 33%). However, Sydney residents also disposed of leftovers more than residents in any other NSW region.

Figure 27: Dealing with leftovers – by regions (measured by percentage)



Nearly half of single-person households (47%) saved leftovers and ate them afterwards. One in five families with children (21%) saved leftovers in the fridge but threw them out later. Families consisting only of adults disposed of leftovers less than other types of households.\

Figure 28: Dealing with leftovers by household composition (measured by percentage)



## 3.9 Avoiding wasting food

The proportion of NSW households avoiding wasting food increased in 2015 from 2012, with the percentage of:

- NSW households reporting at least one way of not wasting food rising from 96% to 97%
- NSW households reporting five or more ways of avoiding wasting food rising from 61% to 68%
- NSW households reporting ten or more ways of avoiding wasting food increasing from 3% to 10%.

The LFHW program goal is that by June 2017, 75% of NSW residents will avoid wasting food in five or more ways.

# 3.10 Attitudes to NSW Government role in reducing food waste

More than half of NSW residents in 2015 believed the government should play a role in reducing food waste (59%), a slight increase from the 2012 survey.

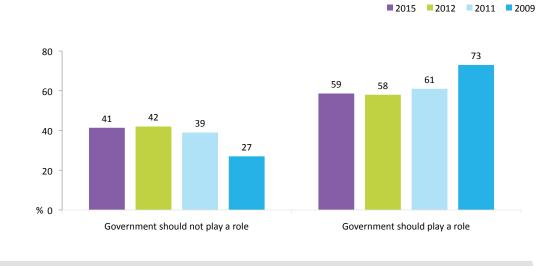


Figure 29: Attitudes to NSW Government role in reducing food waste

Q17. Do you think the NSW Government should have a role in assisting the people of NSW to reduce the amount of food they waste? Base:

Total sample 2009, (n=1200); 2011, (n=1200); 2012, (n=1300); 2015, (n=1337)

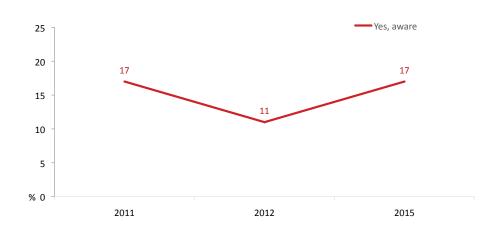
Those more likely to agree the NSW Government should play a role in reducing food waste included families with children (65%), those aged 18-34 (72%) and the CALD community particularly those speaking an Asian language (69%) and those speaking a language such as Arabic (78%).

# **3.11 Awareness of Love Food,** Hate Waste program

#### General awareness of food waste communications

Awareness of media, advertising or promotions related to food waste increased in 2015 from 2012 and was in line with awareness levels seen in 2011 (17%).

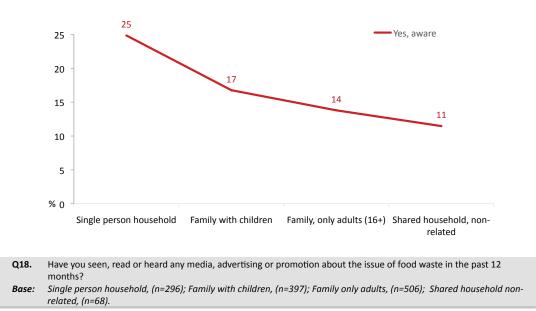
Figure 30: Percentage of people who had seen, read or heard anything about food waste in the past 12 months



Q18. Have you seen, read or heard any media, advertising or promotion about the issue of food waste in the past 12 months?
Base: Total sample 2012, (n=1300); 2015, (n=1337)

A quarter of single-person households (25%) had seen, read or heard general communications relating to food waste in the last 12 months.

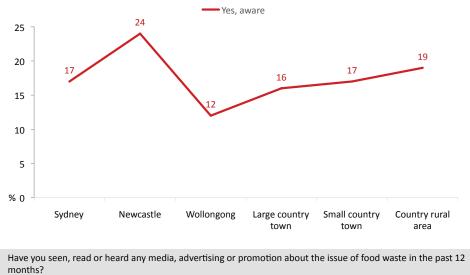
Figure 31: Percentage of people who had seen, read or heard anything about food waste in the past 12 months – by household composition



Q18.

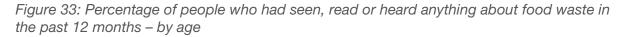
Residents in Newcastle were the most aware of general communications with one in four saying they had seen, read or heard something about food waste in the last 12 months.

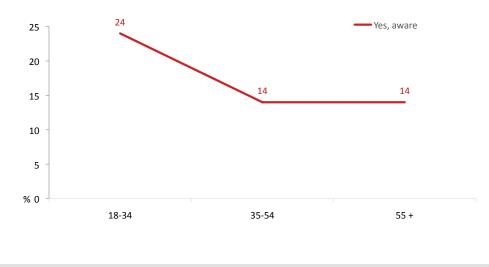
Figure 32: Percentage of people who had seen, read or heard anything about food waste in the past 12 months – by region



Base: Sydney, (n=843); Newcastle, (n=103); Wollongong, (n=63); Large country town, (n=157); Small country town, (n=111); Country rural area, (n=60).

Nearly a quarter of those aged 18–34 (24%) had seen, read, or heard media or advertising about food waste in the past 12 months. There was more disparity in general awareness among age groups in the 2015 survey than in 2012, with general awareness ranging between 11% and 12% across the three main age groups in 2012.





Q18. Have you seen, read or heard any media, advertising or promotion about the issue of food waste in the past 12 months?
Base: 18-34, (n=375); 35-34, (n=530); 55+, (n=432).

#### Source of general awareness of food waste communications

While television remained the most commonly cited source of awareness for food waste communications in 2015 (58%), the percentage of people saying the internet was a source of awareness doubled from 2012 (from 15% to 30%). Similarly, the percentage of people saying newspapers and Facebook were sources of awareness increased significantly (29% and 18% respectively compared to 18% and 9% respectively in 2012), although it was unclear whether respondents were citing printed newspapers or online news.

Residents living in Sydney, Newcastle and Wollongong were more likely to cite the internet as a source of awareness (32%, 33%, and 40% respectively) than residents living in large country towns, small country towns, and country rural areas (21%, 15%, and 26% respectively). Those aged 18–34 were also more likely to cite the internet as a source of awareness (44% compared to the average of 30%) as were families with children (43%) and households speaking Cantonese or Mandarin (45%).

Households with an annual income of \$100,000 or more were more likely to cite Facebook as a source of awareness than households with an annual income of less than \$100,000 (27% compared to 16%).

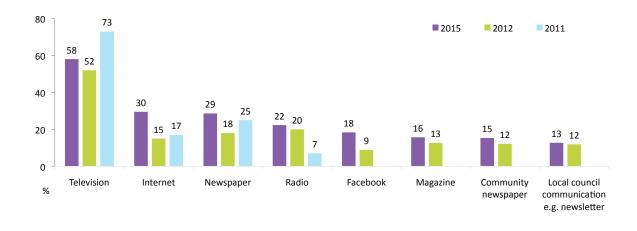


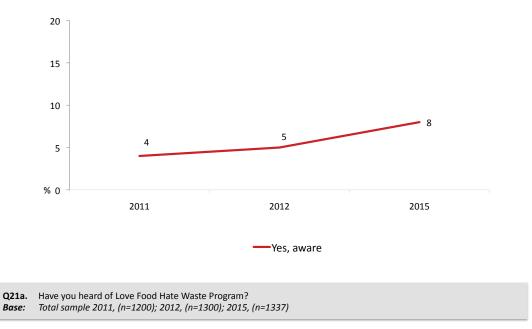
Figure 34: Source of general awareness of food waste communications

**Q19.** Where did you see or hear this media, advertising or promotion? **Base:** Those seen any food waste in media 2012, (n=143); 2015, (n=212)

#### LFHW program awareness

Awareness of the LFHW program continued to increase from 2011. In 2015, 8% of respondents had heard of the LFHW program.





Awareness was mostly driven by Sydney residents, with one in ten (10%) aware of the program while people in other regions had between 1% and 6% awareness.

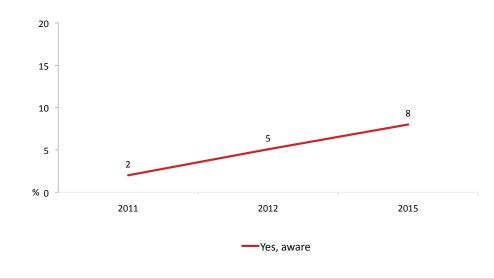
Similar to awareness of general food waste communications, residents aged 18–34 were more likely than those aged 55 and over to be aware of the LFHW program (15% compared to 4%).

#### Awareness of LFHW program logo

While awareness of the LFHW logo remained low in 2015, it continued to increase from 2011. In 2015, just under one in ten people (8%) were aware of the logo.

Awareness of the logo was driven primarily by residents aged 18–34 (17%).

Figure 36: Awareness of LFHW program logo



Q21b. Have you seen the Love Food Hate Waste logo, shown below, in any media, advertising or promotional materials? Base: Total sample 2011, (n=1200); 2012, (n=1300); 2015, (n=1337)

#### Source of awareness of LFHW program

With the exception of TV, sources of awareness of the LFHW program all increased by percentage from 2012, with the internet the most cited source in 2015 (33%).

Most increases in sources of awareness in 2015 were driven by those aged 18–34. Residents aged 18–34 were more likely than other residents to cite the LFHW website (37%), the internet (43%), and Facebook (19%) as sources of awareness.

Households with an annual income of \$100,000 or more were more likely to cite their local council website (30%) and food magazines (33%) as sources of awareness.

Families with children were more likely to cite food magazines (33%) and less likely to cite television (10%) as sources of awareness.

Households speaking an Asian language were less likely to cite food magazines (0%) and more likely to cite local council websites (35%) as sources of awareness, while households speaking a European language other than English were less likely to cite the internet (7%) and more likely to cite a workshop or seminar (16%).

Facebook as a source of awareness was a new addition to the survey in 2015 and was cited as a source of awareness by 13% of respondents.

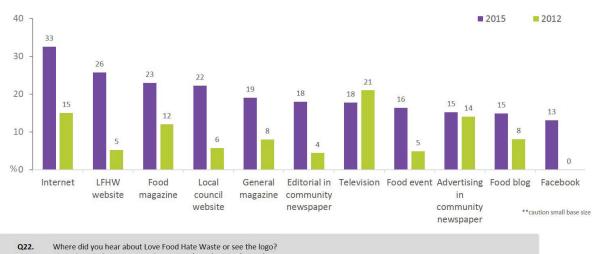


Figure 37: Source of awareness of LFHW program

Base: Those heard of LFHW or seen logo 2012, (n=83); 2015, (n=128)

# **3.12 Influence of LFHW program on avoiding food waste**

#### Actions taken after seeing or hearing LFHW communications

After seeing or hearing LFHW communications, respondents were more likely to use leftovers in other meals (31%), write a shopping list (31%) and plan their meals in advance (30%). They were also a lot more likely to check the temperature of their fridge or freezer than respondents in the 2012 survey (28% compared to 16%).

Residents aged 18–34 were more likely to use leftovers for other meals after seeing or hearing LFHW communications (42% compared to the average of 31%) as were those with an annual household income of \$100,000 or more (49%) and households speaking a European language other than English (38%).

Shared households were more likely to check the temperature of their fridge than the average NSW household as a result of seeing or hearing LFHW communications (37% compared to the average of 28%).

Households speaking an Asian language were more likely to write a shopping list than other groups as a result of seeing or hearing LFHW communications (40% compared to the average of 31%).

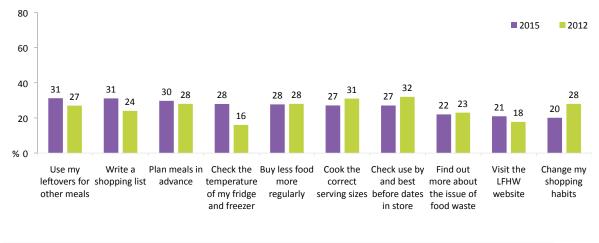


Figure 38: Actions taken after seeing or hearing LFHW communications

Q27. After seeing or hearing the Love Food Hate Waste promotion, media, advertising materials or attending an event, which of the following were you motivated to do?
 Base: Those heard of LFHW or seen logo, (n=141); 2015, (n=128)

#### Amount of food saved or not thrown away

The effectiveness of LFHW program communications in motivating people to avoid throwing away food improved since 2012 with the proportion of households saying they threw away food decreasing from 23% in 2012 to 9% in 2015. Additionally, the proportion of residents saying they saved at least one 4-litre container increased from 27% in 2012 to 53% in 2015.

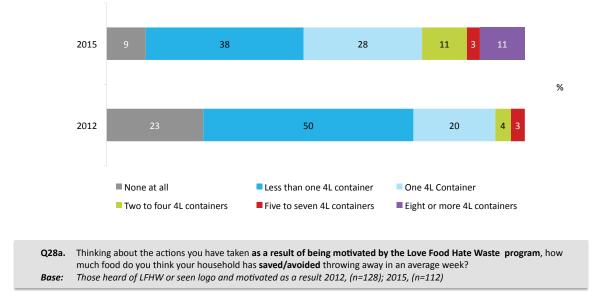


Figure 39: Amount of food saved or not thrown away in litres

#### Value of food saved or not thrown away

Compared to 2012, more NSW households in 2015 said they avoided throwing away food, with just over one in four (27%) saying they saved food worth between \$50 and \$74 compared to 6% in 2012.

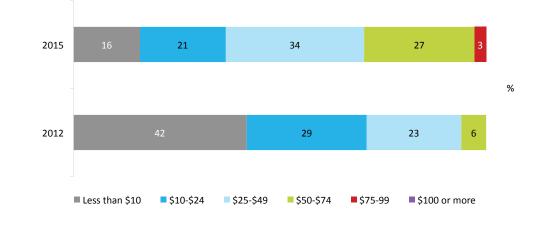


Figure 40: Value of food saved or not thrown away

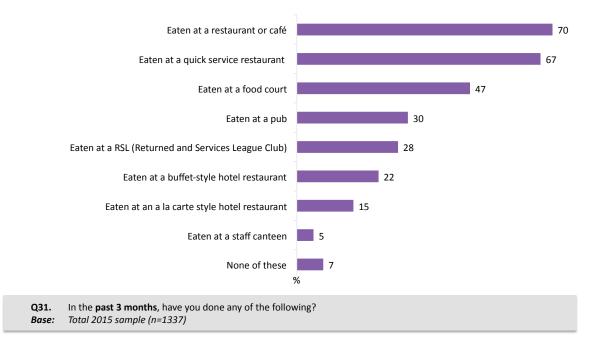
Q28b.	And how much do you think this amount would roughly equate to in dollar value? That is, the approximate dollar
	amount of the food your household has <b>saved/avoided</b> throwing away in an average week.
Base:	Those heard of LFHW or seen logo 2012 and motivated as a result (all actions except compost/worm farm and "other")
	2015, (n=100)

## 3.13 Eating out

#### Places where residents ate out

When it came to eating out, most NSW residents in 2015 ate at a restaurant or café (70%) or at a quick service restaurant (67%) in the past three months.

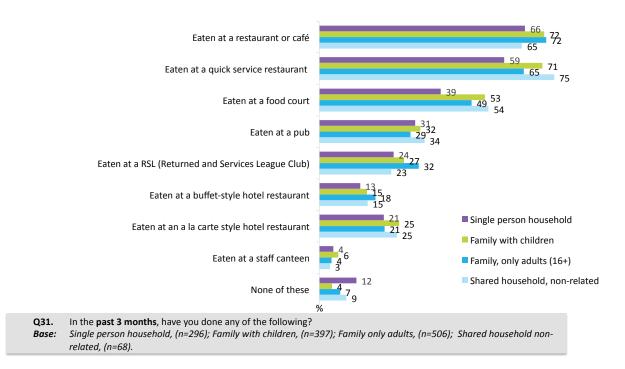
Figure 41: Places where residents ate out (measured by percentage)



LFHW subscribers were more likely than average to have eaten out at a restaurant or café in the last three months (89%) or at a pub (47%).

Three-quarters of shared households (75%) ate at a quick service restaurant in the last three months, whereas single-person households were less likely to eat in these places (59%). Similarly, 54% of shared households ate at a food court in the last three months, compared to 34% of single-person households.

Figure 42: Where residents ate out- by household composition (measured by percentage)



Residents in Sydney were more likely than those in small country towns or country rural areas to have eaten at a restaurant or café in the last three months (73% compared to 60% for both other regions). Those in Newcastle and Wollongong were more likely than those in other regions to have eaten at a quick service restaurant in the last three months (74% and 73% respectively). Newcastle residents were also more likely to have eaten at a pub (44%).

Figure 43: Places	where	residents	ate	out-	by region
0					, 0

	Total %	Sydney %	Newcastle %	Wollongong %	Large country town %	Small country town %	Country rural area %
Eaten at a restaurant or café	70	73	68	66	69	60	60
Eaten at a quick service restaurant	67	66	74	73	67	61	62
Eaten at a food court	47	50	43	50	50	33	37
Eaten at a pub	30	28	44	22	37	31	33
Eaten at a RSL (Returned and Services League)	28	27	34	24	25	31	29
Eaten at a hotel restaurant; buffet style	22	25	19	20	17	15	14
Eaten at a hotel restaurant; A La Carte style	15	16	19	18	15	11	7
Eaten at a staff canteen	5	5	3	6	6	4	2
None of these	7	7	5	9	5	16	8

Q31. In the past 3 months, have you done any of the following?

Base: Sydney, (n=843); Newcastle, (n=103); Wollongong, (n=63); Large country town, (n=157); Small country town, (n=111); Country rural area, (n=60).

#### Frequency of eating out

In 2015, NSW residents liked to eat out, with more than half eating out at least weekly (53%).

Figure 45: Frequency of eating out

Q32.

Base:

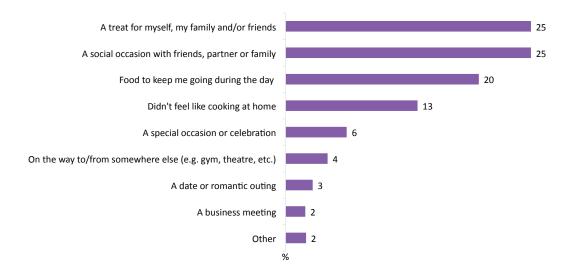


More than half of people aged 18–34 ate out weekly (51%) compared to 41% of people aged 55 and over. Just under a third of residents in country rural areas ate out weekly (32%) compared to the NSW average of 47%.

#### **Reasons for eating out**

On their most recent occasion, one in four NSW residents ate out as a treat for themselves, their family or friends, or for a social occasion with friends, partners or family (25% for both reasons). Several people also ate out to keep themselves going throughout the day (20%).

Figure 45: Reasons for eating out (measured by percentage)



Women were more likely than men to eat out for a social occasion (30% compared to 19%).

Residents aged 55 and over were more likely to eat out for a social event (34%), while those aged 18–34 were more likely to eat out to keep themselves going throughout the day (27%).

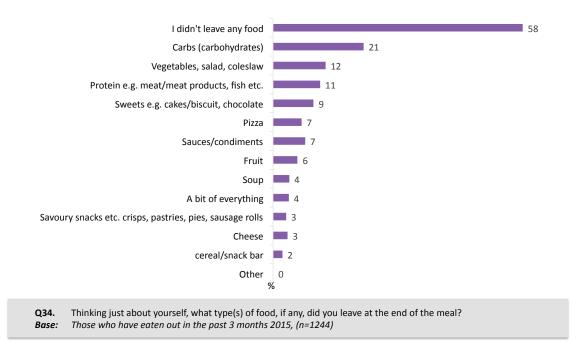
Families with children were less likely to cite a social occasion as the reason for the last time they ate out (16% compared to the average of 25%).

Greek-speaking households were more likely to cite food to keep themselves going throughout the day as the reason for the last time they ate out (30% compared to the average of 20%), while Arabic-speaking households were more likely to cite that they did not feel like cooking at home (45% compared to the average of 13%).

#### Type of food left over when eating out

In 2015, more than half of NSW residents (58%) said they did not leave any food when they were eating out. Of those who did leave food, carbohydrates were the most common food item wasted (21%). There was a similar result in a UK study with chips, vegetables and salad (including garnishes) being the types of food most likely to be left over.

Figure 46: Type of food left over when eating out (measured by percentage)



Residents aged 18–34 were more likely than those aged 55 and over to leave carbohydrates at the end of a meal (31% compared to 15% respectively), while families with children also left carbohydrates (26% compared to 21% of the total) and vegetables, salad and coleslaw (17% compared to 12% of the total).

Arabic-speaking households were more likely to leave carbohydrates (44% compared to 21% of the total), while households speaking Cantonese or Mandarin were more likely to leave vegetables (30% compared to 12% of the total), protein (24% compared to 11% of the total), and sweets (20% compared to 9% of the total).

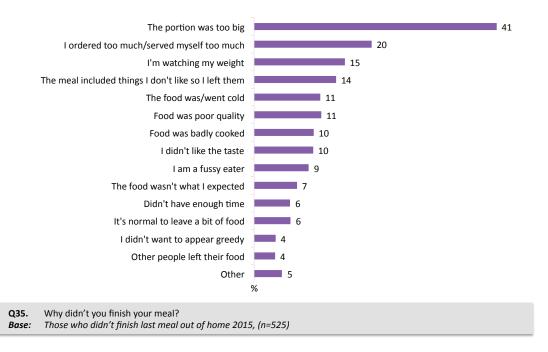
People who snacked during the day were more likely to leave carbohydrates than those who ate out for a special occasion (29% compared to 12%).

#### **Reasons for not finishing meals**

By far the most commonly cited reason for not finishing a meal in 2015 was because the portion size was too big (41%), followed by ordering too much food (20%), watching their weight (15%), and the meal including things they did not like (14%).

There was a similar result in a UK study where two-fifths of respondents stated they left food because the portion size was too large and one in ten said they ordered too much food.

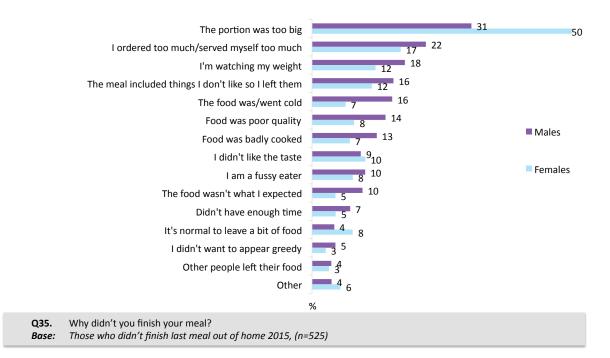
Figure 47: Reasons for not finishing meals when eating out (measured by percentage)



Half of women respondents (50%) said the reason they did not finish their meal was because the portion was too big, compared to 31% of men. More women thought it was a common practice to leave a bit of food behind (8%) than men (4%).

More men than women stated the reason for leaving food was because they were watching their weight (18% compared to 12%).

Figure 48: Reasons for not finishing meals when eating out – by gender (measured by percentage)



Base:

Approximately three in five NSW residents aged 55 and over (62%) said the portion was too big. Those aged 18-34 said they left food over because they were watching their weight (20%), their food was cold (15%) or the food was poor quality (14%).

The portion was too big 39 62 20 24 I ordered too much/served myself too much 10 20 I'm watching my weight 112 13 13 15 The meal included things I don't like so I left them The food was/went cold 11 15 8 10<sup>14</sup> Food was poor quality <u>9</u> 12 18-34 Food was badly cooked <u>1</u> I didn't like the taste 35-54 12 I am a fussy eater 67 55 + 68 The food wasn't what I expected 68 Didn't have enough time -7 It's normal to leave a bit of food I didn't want to appear greedy 6 3 **3**5 Other people left their food 6 10 Other 0/ Q35. Why didn't you finish your meal? Those who didn't finish last meal out of home 2015, (n=525)

Figure 49: Reasons for not finishing meals when eating out – by age (measured by percentage)

Regarding reasons for not finishing meals, more than half the people living in large country towns (53%) thought their portion was too big. People from country rural areas cited their portion was too big (43%), the meal included things they did not like (24%) and the food was not what they expected (22%).

	Total %	Sydney %	Newcastle %	Wollongong %	Large country town %	Small country town %	Country rural area %
The portion was too big	41	38	44	49	53	44	43
I ordered too much/served myself too much	20	22	28	8	5	12	6
I'm watching my weight	15	15	16	20	12	15	10
The meal included things I don't like so I left them	14	15	11	20	9	4	24
The food was/went cold	11	14	4	0	11	0	6
Food was poor quality	11	13	9	11	5	7	12
Food was badly cooked	10	12	4	8	2	0	13
I didn't like the taste	10	10	7	8	11	10	6
I am a fussy eater	9	10	6	5	3	10	6
The food wasn't what I expected	7	7	8	9	3	7	22
Didn't have enough time	6	6	0	8	14	6	0
It's normal to leave a bit of food	6	7	0	9	3	3	0
I didn't want to appear greedy	4	4	4	4	2	0	10
Other people left their food	4	4	5	0	5	0	0
Other	5	3	10	8	4	8	13

Figure 50: Reasons for not finishing meals when eating out - by region

Q35. Why didn't you finish your meal?

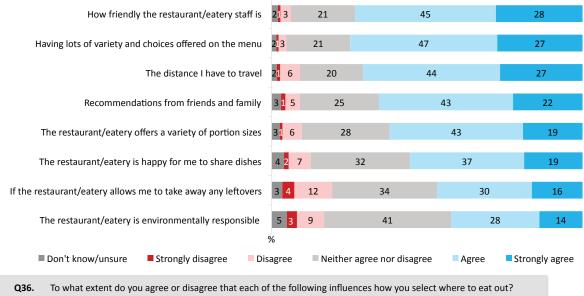
Base: Those who didn't finish last meal out of home 2015, (n=525)

#### **Reasons for selecting restaurants and other eateries**

Among NSW residents, the friendliness of the staff and the variety and choices offered on the menu were the most popular reasons for choosing a restaurant in 2015 (73% and 74% respectively). Distance was also a large consideration (71%).

Although a restaurant's environmental responsibility was not a main reason when selecting restaurants or eateries, 42% of NSW residents agreed it did play some role in their selection.

Figure 51: Reasons for selecting restaurants and other eateries (measured by percentage)

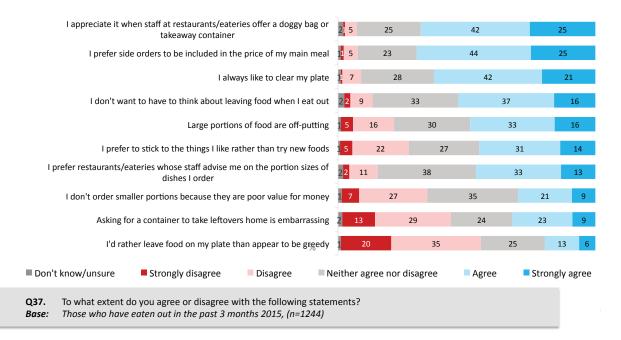


Base: Those who have eaten out in the past 3 months 2015, (n=1244)

#### Attitudes to food and leftovers

Two in three NSW residents (67%) said they appreciated it when a restaurant offered them a doggy bag or takeaway container, while one in three residents (32%) said they were embarrassed to ask for one.

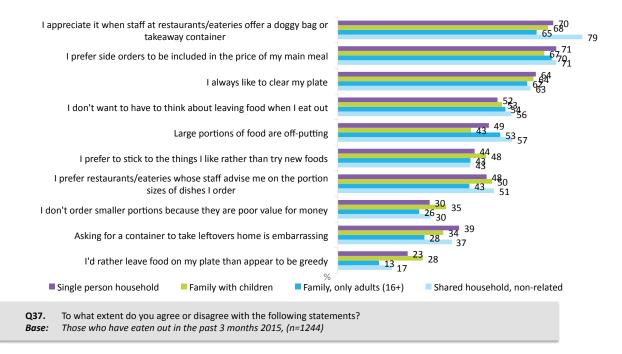
#### Figure 52: Attitudes to food and leftovers (measured by percentage)



Those living in shared households in NSW were more likely than adult families to say they appreciated being offered a doggy bag or takeaway container (79% compared to 65%). Shared households were also more likely than families with children to say they found large portions off-putting (57% compared to 43%).

Both adult families and families with children were less embarrassed than single-person households and shared households about asking for a doggy-bag or takeaway container (28% and 34% compared to 39% and 37% respectively).

Figure 53: Attitudes to food and leftovers – by household (measured by percentage)



Approximately three-quarters of Wollongong residents (74%) appreciated staff offering them doggy bags or takeaway containers but Wollongong residents also preferred to 'clear my plate' (66%).

Half the residents surveyed in Sydney liked it when staff advised them on portion sizes, but a quarter also saidthey would rather leave food on their plate than appear greedy (25%).

Residents living in small country towns and rural country areas were less embarrassed than the average NSW resident to ask for a takeaway container for leftovers (20% and 18% compared to 32% respectively).

	Total %	Sydney %	Newcastle %	Wollongong %	Large country town %	Small country town %	Country rura area %
I appreciate it when staff at restaurants/eateries offer a doggy bag or takeaway container	68	69	61	74	66	66	69
I prefer side orders to be included in the price of my main meal	69	69	72	71	73	64	63
I always like to clear my plate	63	63	56	66	64	63	57
I don't want to have to think about leaving food when I eat out	53	55	44	41	54	53	55
Large portions of food are off-putting	49	50	37	48	50	41	55
I prefer restaurants/eateries whose staff advise me on the portion sizes of dishes I order	46	50	44	44	39	39	37
I prefer to stick to the things I like rather than try new foods	45	46	41	48	44	34	54
Asking for a container to take leftovers home is embarrassing	32	35	25	32	36	20	18
I don't order smaller portions because they are poor value for money	30	34	27	25	23	18	17
I'd rather leave food on my plate than appear to be greedy	20	25	8	7	12	6	7

Figure 54: Attitudes to food and leftovers - by regions

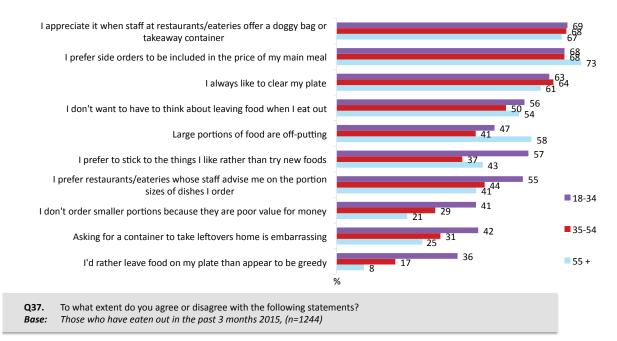
Q37. To what extent do you agree or disagree with the following statements?

Base: Those who have eaten out in the past 3 months 2015, (n=1244)

More than half (58%) of those aged 55 and over agreed that large portions of food were offputting.

Those aged 18–34 preferred to stick to the things they liked rather than try new foods (57%) and preferred restaurants whose staff advised them on portion sizes (55%). They were also more likely than those aged 55 and over to be embarrassed about asking for a doggy bag or takeaway container (42% compared to 25%).

Figure 55: Attitudes to food and leftovers – by age (measured by percentage)



#### **Annoyances with leftovers**

The two most popular reasons NSW residents were annoyed about leftovers in restaurants in 2015 were that 'it's a waste of good food' and 'it's a waste of money' (53% and 50% respectively).

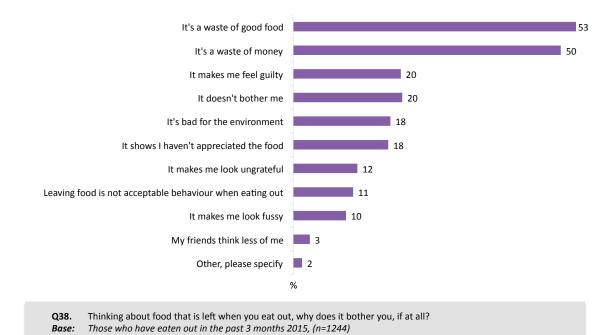


Figure 56: Annoyances with leftovers (measured by percentage)

Residents aged 35–54 were slightly more likely than average to say leaving food was a waste of money (54% compared to the average of 50%).

Residents aged 18–34 were more likely than those aged 55 and over to say leaving food made them feel guilty (30% compared to 14%) and made them look ungrateful (21% compared to 9%). Residents aged 55 and over were more likely than those aged 18–34 to say leaving food did not bother them (28% compared to 12%).

Single-person households and adult families were more likely than families with children and shared households to say leaving food when eating out was a waste of good food (54% each compared to 48% and 49% respectively). Families with children were more likely to say leaving food was a waste of money (54%).

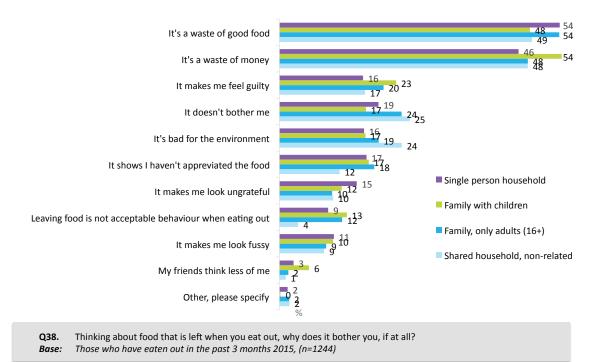
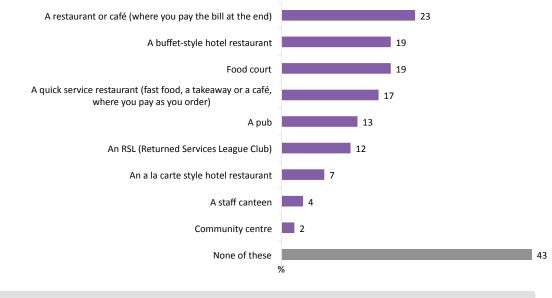


Figure 57: Annoyances with leftovers – by household (measured by percentage)

#### Where people were most likely to leave food when eating out

The most common place respondents were likely to leave food in 2015 was at a restaurant or café (23%), followed by a buffet-style hotel restaurant (19%) and food court (19%).

*Figure 58: Where people were most likely to leave food when eating out (measured by percentage)* 



Q39. In which of the following types of restaurants/eateries are you more likely to leave food at the end of the meal? Base: Those who have eaten out in the past 3 months 2015, (n=1244)

Residents in Sydney were more likely than those in small country towns to leave food at the end of a meal at a restaurant or café (26% compared to 11%). Those in Wollongong were more likely to leave food at a buffet-style hotel restaurant(25%).

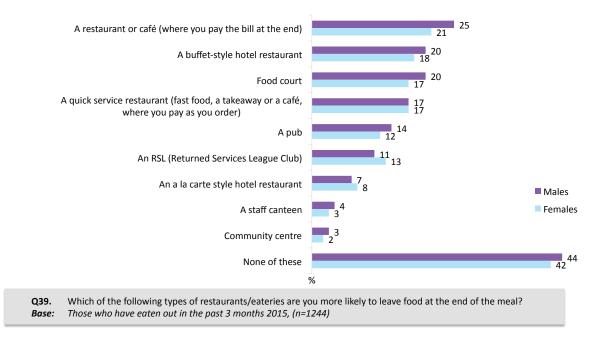
	Total %	Sydney %	Newcastle %	Wollongong %	Large country town %	Small country town %	Country rural area %
A restaurant or café (where you pay the bill at the end)	23	26	20	23	17	11	17
A buffet-style hotel restaurant	19	20	17	25	16	16	8
Food court	19	21	20	12	13	13	17
A quick service restaurant (fast food, a takeaway or a café, where you pay as you order	17	18	16	17	11	15	7
A pub	13	13	16	13	16	14	6
An RSL (Returned Services League Club)	12	11	11	9	15	11	12
An a la carte style hotel restaurant	7	8	7	2	6	4	7
A staff canteen	4	4	6	5	4	1	2
Community centre	2	2	2	2	3	0	0
None of these	43	39	43	44	49	56	55

*Figure 59: Where people were most likely to leave food when eating out – by region (measured by percentage)* 

Q39. In which of the following types of restaurants/eateries are you more likely to leave food at the end of the meal? *Base:* Those who have eaten out in the past 3 months 2015, (n=1244)

Generally, there were minimal differences between men and women in terms of in which types of restaurants and eateries food was most likely to be left at.

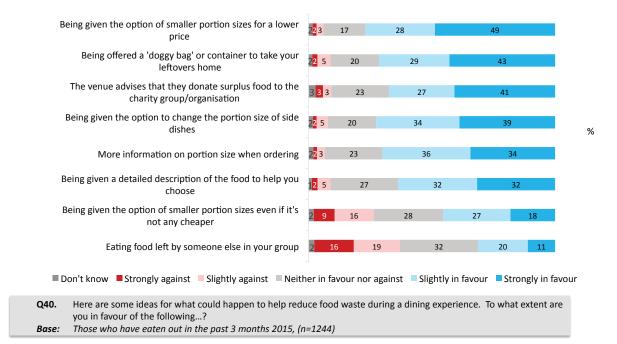
Figure 60: Where people were most likely to leave food when eating out – by gender (measured by percentage)



#### Attitudes to food waste when eating out

More than three-quarters of NSW residents (77%) were strongly or slightly in favour of having an option of smaller portion sizes for lower prices to help reduce food waste, followed closely by the offering of doggy bags (72%).

Figure 61: Attitudes to food waste when eating out (measured by percentage)



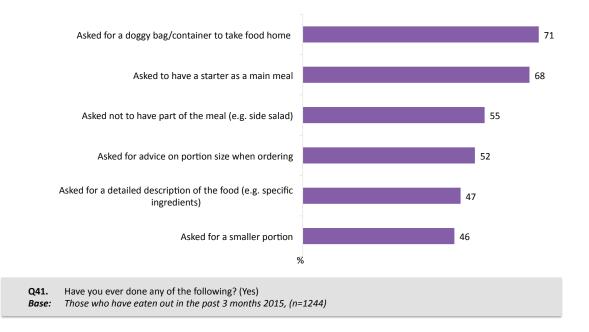
Women were more likely than men to be strongly in favour of being offered a doggy bag (50% compared to 36%). Shared households were also more likely to be strongly in favour of being offered a doggy bag (52% compared to the average of 43%).

Households speaking a European language other than English were more likely to be strongly in favour of being offered a doggy bag (57% compared to the average of 43%), while households speaking an Asian language were less likely to be strongly in favour (29%).

#### History of avoiding wasting food when eating out

Many respondents had asked for a doggy bag at some stage in the past (71%), as well as asked to have a starter as a main meal (68%).

Figure 62: History of avoiding wasting food when eating out (measured by percentage)

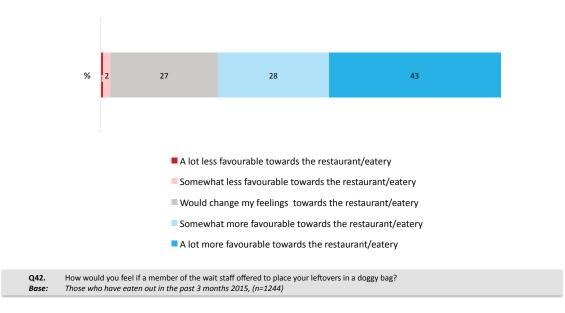


Residents of large country towns were more likely to have asked for a doggy bag in the past (88% compared to the average of 71%), as were families with children (76%) and households speaking Italian (79%) and Spanish (78%). However, households speaking Cantonese or Mandarin were less likely to have asked for a doggy bag (57%).

#### Attitudes to restaurants that offered a doggy bag

Seven out of ten NSW residents (71%) said they would feel more favourable towards the restaurant or eatery if they offered a doggy bag.

Figure 63: Attitudes to restaurants that offered a doggy bag



Shared households were more likely to say they would be more favourable towards a restaurant or eatery that offered a doggy bag (82% compared to the average of 71%).

Households speaking Greek were also more favourable towards a restaurant or eatery that offered a doggy bag (84%).

# 4. People from a non-English speaking background: community differences

In general, those speaking any language other than English tended to live in metropolitan areas like Sydney, were aged 18–34 were educated with a degree or higher qualification, and had a family with children. They believed food was the type of waste most often thrown away in the average NSW household bin and they considered this food waste a possible outcome of not being able to store food properly. They tended to eat out most often at a buffet-style hotel restaurant. They knew about food waste and felt guilty about leaving food when eating out. These respondents also felt the NSW Government should play a role in assisting people to reduce the amount of food they wasted.

Regarding those speaking an Asian language, they also lived in Sydney, were aged 18–34 were educated with a degree or higher qualification, and were Vietnamese, Filipino or Chinese. These respondents believed Australians did not waste much food. When they ate out, the sort of food they usually left, if any, was protein or sweets, although they felt leaving food was unacceptable and made them feel guilty.

Those speaking a European language, in general, were in a family with children and mainly from Italian, Spanish and Greek backgrounds. They tended to eat and cook a lot of food and considered food waste in their household to be the result of cooking too much food. When shopping, they tended to buy items in bulk.

## People from a non-English speaking background: demographics, attitudes and behaviour

#### **Demographics**

People from a non-English speaking background were more likely than average to:

- live in Sydney (+21%; 65%)
- be aged 18-34 (+21%; 28%)
- be a student (+6%; 7%)
- describe their household composition as 'family with children' (+22%; 28%)
- have one person in their household aged 0–6 (+12%; 13%) and no people aged 55–64 (+12%; 75%) or people aged 65 and over (+14%; 75%)
- have completed a university or college of advanced education diploma, degree or higher degree (+20%; 41%).

## 4. People from a non-English speaking background: community differences cont.

#### Attitudes

People from a non-English speaking background were more likely than average to:

- believe that food was the type of waste most often thrown away in the average NSW household garbage bin (+13%; 27%)
- understand the 'best before' date to mean that food must be eaten or thrown away by that date (+12%; 22%)
- have a neutral attitude to the following statement: 'Most cooked food items can be stored for up to 3 months in the freezer without compromising the quality' (+14%; 26%);
- 'Leftovers that have been kept in the fridge for more than one day are unsafe to eat' (+12%; 23%); and 'It is easy to make meals from assorted ingredients that need using up' (+11%; 21%)
- consider food waste in their household to be a possible outcome of not being able to store, or capable of storing food properly (+6%; 5%)
- agree that the NSW Government should have a role in assisting the people of NSW to reduce the amount of food they waste (+10%; 59%)
- be unsure of whether they had heard of the LFHW program (+9%; 12%).

#### **Behaviour**

People from a non-English speaking background were more likely than average to:

- have eaten at a buffet-style hotel restaurant in the past three months (+11%; 22%)
- be neutral about the following statement: 'Large portions of food are off-putting' (+11%; 30%)
- agree with the following statement on food that is left over when eating out: 'It makes me feel guilty' (+10%; 20%)
- be unsure of whether they had ever 'Asked not to have part of the meal' (+6%; 4%).

## 4. People from a non-English speaking background: community differences cont.

## People speaking an Asian language at home: demographics, attitudes and behaviour

#### **Demographics**

People speaking an Asian language at home were more likely than average to:

- live in Sydney (+21%; 65%)
- be aged 18-34 (+29%; 28%)
- consider their main family background to be Vietnamese (+21%; 1%), Filipino (+6%; 0%) or Chinese (+29%; 3%)
- be a student or in paid full-time or part-time work [stats?]
- have one person in their household aged 13–17 (+16%; 13%) and two people aged 18–24 [should this be 18–34?](+11%; 6%)
- have completed a university or college of advanced education diploma, degree or higher degree (+30%; 41%).

#### Attitudes

People speaking an Asian language at home were more likely than average to:

- agree with the following statement about Australian household food waste: 'Australians don't waste much food' (+13%; 14%)
- estimate the dollar value of 'home delivered/takeaway meals' thrown away by their household each week to be \$115 or more (+2%; 2%)
- consider food waste in their household to be a possible result of not being able to store food properly (+9%; 5%)

#### **Behaviour**

People speaking an Asian language at home were more likely than average to:

- state that they left the following types of food at the end of a meal: protein (+12%; 11%); sweets (+14%; 9%)
- agree with the following statements about food that is left over when eating out: 'Leaving food is not acceptable behaviour when eating out' (+12%; 11%); 'It makes me feel guilty' (+16%; 20%)
- be unsure of whether they had ever done the following when eating out: 'Asked for advice on portion size when ordering' (+8%; 4%); 'Asked for a detailed description of the food' (+11%; 4%); 'Asked not to have part of the meal' (+13%; 4%); 'Asked to have a starter as a main meal' (+8%; 3%).

## 4. People from a non-English speaking background: community differences cont.

### People speaking a European language other than English at home: demographics and behaviour

#### **Demographics**

People speaking a European language other than English at home were more likely than average to:

- consider their main family background to be Italian (+18%; 3%), Spanish (+5%; 0%) or Greek (+23%; 2%)
- describe their household composition as 'family with children' (+21%; 28%)
- have one person in their household aged 35–44 (+26%; 17%).

#### **Behaviour**

People speaking a European language other than English at home were more likely than average to:

- consider food waste in their household to be the result of cooking too much food (+14%; 20%)
- rank their household's frequency in participating in the following practices when buying food as; buy items "in bulk" (+18%; 23%).

## 5. Differences between people who had and had not seen the Love Food Hate Waste campaign

The main differences between those who had and had not seen the LFHW campaign were awareness and taking responsibility. Those who had seen the LFHW campaign seemed to be more aware of the issue of food waste and take responsibility for how much food they as individuals were wasting. Those who had not seen the campaign seemed more unaware of the issue of food waste and were less likely to take responsibility for how much food they were wasting. Comments from those who had not seen the campaign included: 'I do not waste any food at the end of a meal', and 'we throw away very little food waste in our household'.

#### Those who had seen the campaign

People who had seen the campaign were most likely to be living in Sydney, male, aged 18–34, and in paid full-time or part-time work. Their household income before tax was more likely to be \$80,000-\$99,999 or \$40,000-\$59,999. They were well-educated, with a university or college of advanced education diploma, degree or higher degree. They were most likely to live in a single-person household.

These people said they were very concerned about the environment, and that their household threw out much more food waste than it should. They also believed that food was the type of waste most often thrown away in the average NSW household, and that Australians as a whole did not waste much food.

They:

- estimated the average NSW household to spend \$900-\$1100 each year on food that was bought but never eaten
- believed that the 'best before' date meant food must be eaten or thrown away by this date
- agreed that food that could have been eaten by people was not wasted if it was fed to pets or composted
- said the reason food got wasted in their household was because they were not sure how to store food properly or they were generally too busy to cook meals that they had planned to prepare
- planned meals to be cooked in the next few days and bought food according to a set budget
- were most likely eat at a buffet-style hotel restaurant, eat out daily, and eat out mostly because they needed food to keep them going during the day (e.g. at lunch-time at work, on a shopping trip, or while travelling)
- most often left carbohydrates at the end of a meal when eating out.

## 5. Differences between people who had and had not seen the Love Food Hate Waste campaign cont.

#### Those who had not seen the LFHW campaign

People who had not seen the LFHW campaign were most likely to be aged 55–64, performing home duties and living in an adults-only household (16+).

They said their household usually threw away very little food waste and that the type of waste most often thrown away in the average NSW household garbage bin was packaging. They believed that Australians as a whole did waste a lot of food.

They:

- believed the 'best before' date meant food was still safe to eat after this date as long as they it was not damaged or had gone rotten
- did not eat out often or only ate out monthly
- said they did not leave any food at the end of a meal when eating out
- said when foodwas wasted in their household, it had generally been left too long in the fridge and freezer, or said that they did not waste any food in their household
- said if they were offered a doggy bag, they would be less likely to be more favourable to the restaurant, compared with those who had seen the campaign
- said the average NSW household spent \$100-\$400 each year on food bought but never eaten.

#### Those aged 18–34

#### **Concern about environmental problems**

 Those aged 18–34 year were driving the overall increase in environmental concern regarding food waste. One in three (32%) expressed a great deal of concern. They were also more concerned than other age groups about food waste's impact on quality of life (32%) but were less concerned than other age groups about the impact of food waste on future generations (17%).

#### Areas of household waste

- Between 2012 and 2015, the proportion of 18–34-year-olds who said they threw away much more food than they should increased by 17 percentage points (up from 2% in 2012 to 19% in 2015).
- This age group was more likely than other age groups to list food as the type of waste most often thrown away in an average household bin (40%) and least likely to underestimate the value of food wasted to be between \$100 and \$400 a year (32% compared to 42% of those aged 55 and over).

#### Knowledge of food labels

• There was more misunderstanding among those aged 18–34 of the meaning of the 'best before' date.

#### General attitudes to storing and eating food

People aged 18-34:

- were more likely than those aged 55 and over to say they thought carefully about how much food they would eat when doing their shopping, with an average rating of 2.4 compared to 1.9 – in contrast, they were more likely to say they often found the food they had bought did not get eaten
- agreed wasting food contributed to climate change (52% compared to 32% for those aged 55 and over)
- were less confident about storing items in the freezer than those aged 55 and over.

#### Value and quantity of food wasted

 Based on their own estimation, NSW residents aged 18–34 continued to waste the largest amount of food in 2015 (7.6 litres per week compared to the average 5.9 litres per week), while those aged 55 and over continued to waste the least amount (4.6 litres per week). In terms of value, those aged 18–34 estimated they wasted \$129.65 worth of food per week compared to the average amount of \$74.35.

#### Love Food, Hate Waste program

Those aged 18-34:

- had the highest level of awareness of the LFHW program of any age group, with 24% having seen, read or heard media or advertising about food waste in the past 12 months and 15% being aware of the LFHW program
- were more likely than other age groups to cite the internet as a source of awareness (44% compared to the average of 30%)
- drove increased awareness of the LFHW logo (17%) and listed key sources of awareness of food waste as the LFHW website (37%), the internet (43%) and Facebook (19%).

#### Influence of LFHW program on avoiding food waste

• Residents aged 18–34 were more likely to use leftovers for other meals after seeing or hearing LFHW communications (42% compared to the average of 31%).

#### **Eating out behaviour**

People aged 18-34:

- were more likely than those aged 55 and over to eat out on a weekly basis (51% compared to 41%) and more likely to say the reason was 'to keep them going during the day' (27% compared to 12% of those aged 55 and over)
- were more likely to leave carbohydrates at the end of a meal when eating out (31% compared to the average of 21%) and were generally fussier than average, watching their weight, saying their food was cold or saying their food was of poor quality
- preferred to stick to the things they liked rather than trying new food (57%) and preferred restaurants whose staff advised them on portion sizes (55%); they were also more likely than those aged 55 and over to be embarrassed about asking for a doggy bag or takeaway container when eating out (42% compared to 25%).
- were more likely than those aged 55 and over to say leaving food made them feel guilty (30% compared to 14%) and look ungrateful (21% compared to 9%).

#### Families with children

#### Knowledge of food labels

- Families with children tended to be more likely than average to correctly state the 'use by' date meant food must be eaten or thrown away by that date (71% compared to the average of 64%).
- Families with children were less likely than average to correctly state the 'best before' date meant food was still safe to eat after that date as long as it had not been damaged or had gone rotten (64% compared to the average of 72%).

#### General attitudes to storing and using food

Families with children had less confidence than other households in making meals from assorted ingredients that needed using up (67% compared to single-person households – 76% and shared households – 80%) and in storing food items in the freezer (57% compared to single-person households – 67% and shared households – 68%).

#### Value and quantity of food wasted

- Families with children wasted more food per week than the average NSW household (7.0 litres each week compared to the average of 5.9 litres each week).
- By their own estimation, families with children threw away \$90.41 worth of uneaten food per week (compared to the average amount of \$74.35).

#### Reasons for household food waste

- Families with children tended to be more likely than average to cite 'some household members don't always finish their meal' (20% compared to the average of 12%) as to the main reason food was wasted.
- One in five families with children (21%) saved leftovers in the fridge but then threw them out later.

#### Love Food, Hate Waste program

• Families with children were more likely than average to cite food magazines (33%) and less likely to cite television (10%) as sources of awareness of food waste.

#### **Eating out behaviour**

• Families with children were less likely than average to eat out on a social occasion (16% compared to the average of 25%).

Families with children:

- were more likely than average to leave carbohydrates at the end of a meal when eating out (26% compared to the average of 21%) and vegetables, salad and coleslaw (17% compared to 12%); and found large portions off-putting (57% compared to 43%)
- were less embarrassed than single-person households and shared households about asking for a doggy bag or takeaway container when eating out (28% and 34% compared to 39% and 37% respectively)
- found leaving food when eating out a waste of money (54%).

#### Shared households

Although those living in shared households were more likely to be aged 18–34 than the average NSW resident (50% compared to the average of 28%), they did differ from this age group in some key areas:

- those living in shared households were more likely than those aged 18–34 to consider their main family background to be Australian (77% compared to 61% and the average of 65%)
- whereas 18–34-year-olds were more likely to be students (20% compared to the average of 7%), those living in shared households were not (10% compared to the average of 7%)
- those living in shared households were as greatly concerned about environmental problems as the average person (24% compared to the average of 23%) whereas those aged 18–34 were more likely than the average person to be greatly concerned (32%)
- people living in shared households indicated throwing away similar amounts of uneaten food as the average person (11% compared to the average of 9%) whereas those aged 18–34 were more likely to indicate throwing away much more food than they should (19%).

#### Amount of food wasted

• Shared households wasted more food than the average household, wasting 7.1 litres per week compared to the average of 5.9 litres. This equates to \$103.44 worth of wasted food a week compared to the average of \$74.35 a week.

#### Knowledge of food labels

• Shared households were more likely than average to correctly state the 'use by' date meant food must be eaten or thrown away by that date (76% compared to the average of 64%).

#### Attitudes to food waste

• Shared households were more confident than families with children about storing food in the freezer, with 67% agreeing most cooked food items could be stored for up to three months (compared to 57% of families with children).

#### LFHW program

• Shared households were more likely than the average NSW household to check the temperature of their fridge as a result of seeing or hearing LFHW communications (37% compared to the average of 28%).

#### Behaviour when eating out

- Three-quarters of shared households (75%) had eaten at a quick service restaurant in the last three months.
- Those living in shared households in NSW were more likely than adult families to say they appreciated being offered a doggy bag or takeaway container when eating out (79% compared to 65%). People in shared households were also more likely than average to be strongly in favour of being offered a doggy bag (52% compared to the average of 43%).
- Shared households were more likely than average to say they would be more favourable towards a restaurant or eatery that offered a doggy bag (82% compared to the average of 71%).

#### Households with annual incomes of \$100,000 or more

#### Areas of household waste

#### Households with annual incomes of \$100,000 or more:

- drove the increase in being moderately concerned that they threw away more food than they should (23% compared to 11% of households with annual incomes of less than \$100,000).
- were more likely to underestimate the value of average food waste than households with annual incomes of less than \$100,000 (28% compared to 37%) by estimating food waste was worth between \$100-\$400 a year.

#### Knowledge of food labels

### Households with annual incomes of \$100,000 or more were more likely than households with annual incomes of less than \$100,000:

- to correctly state the 'use by' date meant food must be eaten or thrown away by that date (69% compared to 63%)
- to correctly state the 'best before' label meant food was still safe to eat after that date as long as it had not been damaged or had gone rotten (76% compared to 70%).

#### Value and quantity of food wasted

• Households with annual incomes of \$100,000 or more wasted more food in terms of volume than the average NSW household (6.5 litres per week compared to 5.9 litres).

#### Reasons for household food waste

 Households with annual incomes of \$100,000 or more were more likely than households with annual incomes of less than \$100,000 to buy food according to a set budget (57% compared to 39%).

#### Love Food, Hate Waste program

 Households with an annual income of \$100,000 or more were more likely to cite Facebook as a source of awareness than households with annual incomes of less than \$100,000 (27% compared to 16%). They were also more likely to cite their local council website (30%) and food magazines (33%) as key sources of awareness.

#### Influence of LFHW program on avoiding food waste

Households with annual incomes of \$100,000 or more were more likely than other households to use leftovers for other meals after seeing or hearing LFHW communications (49%).

## 7. Demographic, gender and age differences

#### Location

#### Attitudes to waste

- Those in small country towns were a lot more likely than people in other locations to make meals from assorted ingredients that needed to be used (83%).
- People living in large country towns were most concerned than people in other locations about food contributing to climate change (49%).
- Those living in country rural areas believed food could be stored up to three months in the freezer (69%), whereas those in Wollongong were less likely to believe this statement (54%).

#### **Food planning**

- Those living in Newcastle were more likely to check what food was already in the house before shopping than those in Wollongong (76% compared to 58%).
- People in Newcastle (42%) and country rural areas (43%) were the least likely to plan meals to be cooked over the next few days.
- People in small country towns (69%) and Newcastle (67%) were the most likely to write a shopping list and stick to it, whereas people in Wollongong were least likely (57%).

#### Leftover food

- About two in five (43%) people in Sydney saved their leftovers in the freezer and ate them later. However, those in Sydney were also more likely to throw out leftovers both immediately after their meal (19%) and after they had been in the freezer (15%).
- Those living in Newcastle were most aware of the LFHW campaign, with nearly a quarter of respondents having seen, read or heard it (24%).

#### Behaviour when eating out

- Those living in Sydney (73%) were most likely to have eaten at a restaurant or café in the last three months, and of those, 26% left food at the end of their meal.
- People living in Wollongong (73%) were most likely to have eaten at a quick service restaurant, and most often left food at a buffet-style hotel restaurant (25%).
- Respondents in Newcastle were most likely to have eaten at a quick service restaurant (74%) and pub (44%) whereas people in small country towns were most likely to have eaten at none of these establishments (16%).

#### 7. Demographic, gender and age differences cont.

#### Reasons for not finishing meals when eating out

- More than half (53%) of those living in large country towns thought their portion was too big.
- People from country rural areas cited the food was not what they expected (22%), and the meal included things they did not like (24%) as the key reasons for leaving food when they ate out.
- With leftovers, approximately three-quarters of those living in Wollongong appreciated it when staff offered them doggy bags or takeaway containers, but they also liked to clear their plates (66%).
- Half the respondents in Sydney liked it when staff advised them on portion sizes, but also said they would rather leave food than appear greedy by finishing their food (25%).

#### Gender

- Half the women surveyed said the reason for not finishing their meal was because the portion was too big, compared to 31% of men.
- The reasons men were most likely to leave food when eating out were more widespread: some ordered too much, some said they were watching their weight, and others said the meal included things they did not like, or the food went cold.
- Men were more likely than women to have eaten at a buffet-style hotel restaurant in the last three months (27% compared to 18%).
- A quarter of men surveyed left food at a restaurant or café, and one in five women left food in a buffet-style hotel restaurant or food court.

#### 7. Demographic, gender and age differences cont.

#### Age

- More people aged 55 and over than those from other age groups made meals from leftover ingredients (84%) and stored cooked food items in the freezer (70%), but were least likely to believe food waste contributed to climate change whereas more than half of those aged 18–34 believed wasting food contributed to climate change (37% compared to 52% respectively).
- Those aged 18–34 were more aware of the issue of food waste than those from other age groups, with nearly a quarter of them (24%) having seen, read, or heard media or advertising about the issue of food waste in the past 12 months.
- Regarding not finishing meals when eating out, approximately three out of five people aged 55 and over said the portion was too big for them (62%). Those aged 18–34 left food on the plate because they were watching their weight, or their food was cold or of poor quality.
- Regarding leftovers when eating out, more than half (58%) of those aged 55 and over said they found large portion sizes of food off-putting.
- Those aged 18–34 preferred to stick with food they liked when eating out rather than trying new foods (57%). They also preferred restaurants whose staff advised them on portion sizes (55%).





